

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

An Illustrated Record of Mining, Metallurgical, Railway, Financial, Industrial, And Engineering Progress.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper and for Transmission Abroad.]

No. 3153.—VOL. LXVI.

LONDON, SATURDAY, JANUARY 25, 1896.

PRICE..... SIXPENCE.
BY POST, £1 4s. PER ANNUM.

A. CORNFORTH AND CO.,
STOCK BROKERS AND MINING SHARE DEALERS,
15. NEW BROAD STREET, LONDON, E.C.

BUSINESS IN ALL CLASSES OF STOCKS AND SHARES.—
SPECIAL BUSINESS in KAFFIE, WEST AUSTRALIAN
and all Mining Shares. Prompt Delivery made a special feature.

Mining Circular free on application.

BANKERS: CITY BANK.—Telegraphic Address: "Atheinley, London."

ASSAY OFFICE AND LABORATORY.

B. KITTO'S,
30 and 31, ST. SWITHIN'S LANE, LONDON, E.C.

ASSAYS MADE OF ALL ORES. ANALYSES.
ASSAYING TAUGHT.

W. PELLEW HARVEY,
F.C.S., M.Fed.Inst.M.E.,
MINING ENGINEER AND METALLURGICAL CHEMIST.
VANCOUVER, BRITISH COLUMBIA.
Use A.B.C. and Moreing and Neal's Codes. Cable:—"Analysis," Vancouver,
Canada. Government Examiner under the Bureau of Mines' Act.
Canadian Agent of the Cassel Gold Extracting Company (Limited), Glasgow.
Five Years in British Columbia, and for several years at Swaziland and Bechuanaland.
Information supplied to Syndicates at moderate terms.

E. HENRY DAVIES, F.G.S.,
CONSULTING MINING ENGINEER,
6, GREAT WINCHESTER STREET, LONDON, E.C.
Author of "Machinery for Metalliferous Mines."
Joint Author of "Metalliferous Mines and Mining."
"Earthy and other Minerals and Mining."
Undertakes the INSPECTION and MANAGEMENT of MINES at home and abroad, and the introduction of approved Properties to Capitalists.
Minerals of all descriptions purchased in large or small quantities.

COLORADO MINING AND OTHER INVESTMENTS.

THOMAS TONGE, DENVER, COLORADO.
SPECIALITIES—Gold Properties; Leasing and Development
Syndicates.
Cable: "TONGE, DENVER." Code, "A. B. C." Fourth Edition.

MINERAL PROSPECTING

AND BORINGS FOR WELLS.
Large Experience. Quick Speed. Work Guaranteed.
APPLY TO

VIVIAN'S BORING & EXPLORATION CO., (LIMITED)
WHITEHAVEN

Deepest Borehole in England (3195 feet) put down by this Company
who have completed about 56 miles of boring.
Telegraphic Address: "DIAMOND, WHITEHAVEN."

PUMPING MACHINERY.

See Illustrated Advertisement every third week.

HATHORN, DAVEY and CO., LEEDS.

CANNOCK CHASE COAL BY CANAL AND RAILWAY.

THE COMPANY SEND COAL BY RAILWAY in Trucks to all Stations, and load Canal Boats at their extensive Wharves on the Anglesey Branch of the Birmingham Canal, adjoining the Colliery; and also at Hesnesford Basin, Cannock. For Prices, apply to

J. NEWLAND BROWN,
WARWICK CHAMBERS, CORPORATION STREET,
BIRMINGHAM.

Retail Department: COLMORE CHAMBERS, 1, NEWHALL ST., BIRMINGHAM.
London Office: 9 and 10, Southampton Street, High Holborn, W.C.

GOLD ASSAYING, &c.

GENTLEMEN having only a short time at their disposal can obtain SPECIAL INSTRUCTION in ASSAYING ORES of all kinds.

For Prospects, &c., apply to

MARTIN and PETHYBRIDGE,
ASSAYERS, &c., LABORATORY AND TESTING WORKS,
183, KING'S ROAD, CHELSEA, S.W.

Complete Analysis of Constituents of any Ore from £1 1s. to £2 2s.
GOLD ASSAYS CONDUCTED WITH CHECK, 7s. 6d. PER SAMPLE.
GOLD ORES PRACTICALLY TESTED BY STAMP BATTERY
And other processes.

J. GRANT MACLEAN,
STOCK AND SHARE BROKER, STIRLING, N.B.
TELEGRAPHIC ADDRESS—"BONDING, STIRLING."

Clients supplied gratis with Price Lists and Prospectuses explaining the whole system of dealing in Shares.
REFERENCES ON APPLICATION.

Refers to his Share Market List on page 127 of to-day's Journal.

GEORGE GREGORY AND CO.,
STOCK AND SHARE DEALERS,
LONDON, MANCHESTER, LIVERPOOL, BRIGHTON, HASTINGS.

Every Investor and Speculator, before operating, should read Gregory's "Hints to Speculators," 420 pages. Ninth Edition, Illustrated. Gratis and post free on application to

GEORGE GREGORY & CO.,
STOCK AND SHARE DEALERS.

HEAD OFFICES:
NOS. 3 AND 4, TOKENHOUSE BUILDINGS, LOTHBURY, BANK OF ENGLAND, LONDON, E.C., AND BRANCHES.

ASSAY OFFICE AND ORE TESTING WORKS.

JOHN D. WARREN,
(Late HERBERT R. EDMUND)
BERKLEY GROVE WORKS,
BERKLEY ROAD, CHALK FARM, N.W.
Gold and Silver Assays, 7s. Cyanide, Amalgamation,
Chlorination, or Concentration Tests, including Assays, £1 each.
Assays made of all Ores.

INSTITUTE OF MINES AND FORESTS OF BRITISH GUIANA.

Incorporated under the Local Ordinance 22 of 1890,
For the PROTECTION and DEVELOPMENT of the
MINING AND FOREST INDUSTRIES OF THE
COLONY.

PRESIDENT—Mr. GEORGE GARNETT (Member of the Legislature).
VICE PRESIDENT—Mr. HUGH SPROSTON, Junr.

Head Office—GEORGETOWN, DEMERARA.

Official information respecting the Gold Industry and the
Forests' Products of the Colony will be supplied on application
to the Secretary.

BRITISH GUIANA AND THE NEW GOLD INDUSTRY.

BRITISH GUIANA BANK.
Incorporated by Ordinance of the Governor and Court of Policy of British
Guiana 11th November, 1836.

Confirmed by the Queen in Council, 6th October, 1838.

SUBSCRIBED CAPITAL..... \$1,400,000 | PAID-UP..... \$926,520

RESERVE FUND, \$288,000

CHAIRMAN: Mr. HUGH SPROSTON, Junr.
HEAD OFFICE: GEORGETOWN, DEMERARA.

MANAGER: GEO. W. LANE. | ACCOUNTANT: F. A. CONYERS, Junr.

BRANCH OFFICE: NEW AMSTERDAM, BERBICE,

London..... Smith, Payne, and Smiths.

New York..... Maitland, Phelps, and Co.

British North America Bank of British North America.

Newfoundland..... Bank of Nova Scotia, St. John's.

Current Accounts opened in accordance with the usual practice of Bankers.

Money Received on Deposit on Interest. Bills of Exchange negotiated.

Letter of Credit issued by London Agents on Demerara free of charge.

Raw Gold Purchased or Shipped on Consignment.

Bills Collected and every other description of Banking Business transacted.

THE BANK OF AFRICA (LIMITED).
ESTABLISHED 1879.

Head Office, 118, Cannon Street, London.

SUBSCRIBED CAPITAL £1,575,000

Paid-up, £327,000; Reserve Fund, £277,138

General Manager—JAMES SIMPSON, Cape Town.

BRANCHES

Alluvial North, Cape Town, Cradock, East London, Grahamstown, Kimberley
King Williams Town, Oudtshoorn, Paarl, Port Elizabeth, Queen's Town
Bethlehem, Bloemfontein, Fauresmith, Harrismith, Ladybrand, Winburg

Durban, Newcastle, Pietermaritzburg, Barberton, Johannesburg, Klerksdorp,
Pretoria, Vryheid, Beira, Delagoa Bay, Bulawayo, Salisbury.

The Bank issues drafts, makes telegraphic remittances, buys and collects bills

and conducts all kinds of banking business.

Deposits received on terms which may be ascertained on application.

R. G. DAVIS, Secretary.

ESTABLISHED 1851

BIRKBECK BANK

SOUTHAMPTON BUILDINGS, CHANCERY LANE, LONDON.

TWO-AND-A-HALF per CENT. INTEREST allowed on DEPOSITS repayable
on Demand.

TWO per CENT. on CURRENT ACCOUNTS on the minimum monthly
balances, when not drawn below £100.

S A V I N G S D E P A R T M E N T .

For the encouragement of Thrift, the Bank receives small sums on Deposit
and allows Interest monthly on each completed £1.

The Birkbeck Almanack, with full particulars, post free.

FRANCIS B. VENSCROFT, Manager.

R. C. CAMPBELL-JOHNSTON.
(OF SWANSEA, INDIA, AND THE STATES).
FOUR YEARS IN BRITISH COLUMBIA.

MINING ENGINEER AND METALLURGIST
POSTAL ADDRESS: BOX 40, VANCOUVER, B.C.
CABLE ADDRESS: CAMPBELL-JOHNSON, VANCOUVER.

A.B.C. CODE.

MINES EXAMINED AND REPORTED ON, DEVELOPED
AND MANAGED.

Furnaces, Mills, and Mining Plants Planned and Erected.
ORES BOUGHT AND SOLD.

A. G. CHARLETON,
MINING AND METALLURGICAL ENGINEER,
Memb. North of England Inst. of Mining & Mechanical Engineers,
A.R.S.M.,
Mem. American Inst. of Mining Engineers.

Address, Dashwood House, E.C.

J. A. JONES, Mining Engineer,
(M.Inst.M.M., M.N.Eng. Inst.M.M.E.)
GIJON (ASTURIAS), SPAIN.

APPLEBY BROS.,

22, WALBROOK, DRY CRUSHING ROLLS
LONDON, E.C.

AND APPLIANCES FOR THE AUTOMATIC TREATMENT OF ORE BY THE CYANIDE PROCESS.

ROYAL SCHOOL OF MINES.
TWENTY-THIRD ANNUAL DINNER OF THE OLD STUDENTS.

For Fall Report of this Dinner, which took place last evening, see "THE MINING JOURNAL," Saturday, February 1, 1896.

CROSBY LOCKWOOD & SON'S BOOKS ON MINING.

By M. EISLER:—

Metallurgy of Gold. Fourth Edition, Enlarged to 700 pp. With
Folding Plates and Working Drawings. 8vo., 16s. cloth.

Cyanide Process of Gold Extraction. 8vo., 7s. 6d. cloth.

Metallurgy of Silver. Crown 8vo., 10s. 6d. cloth.

Metallurgy of Argentiferous Lead. 12s. 6d. cloth.

Handbook on Modern Explosives. Crown 8vo., 10s. 6d.

Prospector's Handbook, by J. W. ANDERSON. Sixth Edition, enlarged, crown 8vo., 3s. 6d. cloth; 4s. 6d. leather.

Machinery for Metalliferous Mines, by E. HENRY DAVIES. Crown 8vo., 12s. 6d. cloth.

Metalliferous Minerals and Mining, by D. C. DAVIES. Fifth Edition, by E. HENRY DAVIES. Crown 8vo., 12s. 6d. cloth.

Earthy and other Minerals and Mining, by D. C. DAVIES. Third Edition, by E. HENRY DAVIES. Crown 8vo., 12s. 6d. cloth.

Miner's Handbook, by Prof. J. MILNE. 7s. 6d. leather.

Pocket-Book for Miners and Metallurgists, by F. DANVERS POWER. Fcap 8vo., 9s. leather.

Colliery Manager's Handbook, by CALER PAMELY. Third Edition, enlarged, medium 8vo., 25s. cloth.

London: CROSBY LOCKWOOD & SON, 7, Stationers' Hall Court, E.C.

SOUTH AFRICAN GOLD MINES.

A SYNDICATE has been FORMED to send a Member of a well-known Firm of Mining Engineers out to South Africa to REPORT UPON and COLLECT ACCURATE INFORMATION concerning the most Valuable Mines.

For terms of Membership in the Syndicate apply, "MINING" Post Office, Nottingham.

THE LIQUIDATION OF SILVER ORES WITH HYPOSULPHITE SOLUTIONS.
By C. A. STETFELDT. COMPLETELY REVISED.

With Two Plates showing Construction of a LIQUIDATION PLANT. Published and Sold in the United States and Mexico by the Author

867, ALICE STREET, OAKLAND, CALIFORNIA.

Price, bound in Cloth, \$5.

For all other countries the Sale is conducted by CRAZ and GERLACH (Joh. Stettner), Freiberg in Sachsen, Germany.
Price 20s. net.

AUSTRALIAN MINERALS.

COLLECTIONS of AUSTRALIAN MINERALS for Show Cases.
or for technical purposes supplied to order. Price from £2 2s. upwards. On receipt of order with remittance a collection will be made up and dispatched without delay.

MINES REPORTED ON.

J. B. AUSTIN, Mineralogist, Adelaide, S.A.

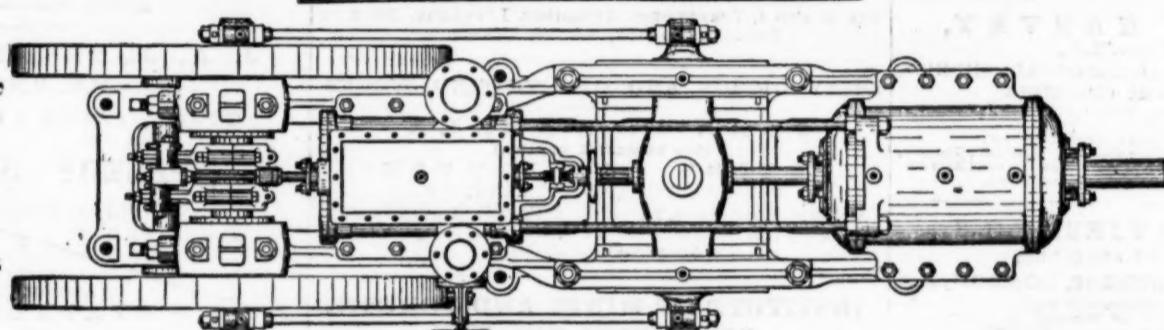
INDEX TO ADVERTISEMENTS.

THOSE WITHOUT NUMBER OF PAGE DO NOT APPEAR IN THIS ISSUE.

	PAGE.		PAGE.	PAGE.	
Ainsworth, H. S. ...	... Dry Crushing Rolls	101	Baston, Anderson, and Goolden ...	Mining Machinery &c.	130
Appleby, Bros. ...	... Mineralogist	101	Elliott, Sons, and Co. ...	Embrocation	103
Austin, J. M. ...	... Dry Concentration	101	Epps and Co. ...	Cocca	132
Bank of Africa, (Ltd.) ...	... Tube Maker	128	For Sale ...	128	
British Guiana Bank ...	... Mining Instruments	128	Francis and Jenkins ...	Copper Works Ladies	—
British Columbia Mines ...	... Fuse Manufacturers	101	Frazer and Chalmers (Ltd.) ...	Mining Machinery	102
Bennet, Sons, and Co. ...	... Mining Machinery	—	Frictionless Engine Packing Company ...	Engine Packing, &c.	130
Birkbeck Bank ...	... Steel Rails, &c.	—	Gates Ironworks Co. ...	Rock and Ore Breaker	130
Birks-Scott and Western ...	... Mining Machinery	—	Gilkies and Co. ...	Turbines	129
Bull's Works Supply Company (Limited) ...	... Steel Rails, &c.	—	Green, G. ...	Ore Dressing Machinery	104
Business Cards—	... Stonebreaking Machinery	128	Gregory, G., and Co. ...	Stock and Share Dealers	101
Baxter, W. G. ...	... Aerial Ropeways	128	Griffin and Co.'s Publications ...	—	132
Cominco, R. E. ...	... Dry Concentration	128	Hathorn, Davy and Co. ...	Pumping Engines	101
Clarkson-Stanfield Concentrator (Ltd.) ...	... Metal Perforators	128	Harvey, W. Fellow ...	Mining Engineer	101
Chatterton, George J. ...	... Rock Drills	128	Holloway's Ointment and Pills ...	—	—
Davis and Son ...	... Mining Instruments	128	Holman Bros. ...	Rock Drills and Compressors	105
Davis and Sons ...	... Mining Machinery	128	Hopkinson and Co. (Ltd.) ...	Safety Boiler Mountings	—
Dee, Joseph ...	... Jodelite	128	Howes, S. ...	Turbines	132
Fraser and Chalmers (Ltd.) ...	... Mining Machinery	128	Hughes, T. Vaughan ...	Mining Engineer	—
Gates Ironworks Co. ...	... Rock and Ore Breaker	128	Humboldt Engineering Works Co. ...	Mining Machinery	—
Gilkes and Co. ...	... Turbines	128	Humble, S., jun. ...	Hand Power Fan	—
Kraus, F. M., F.G.S., F.L.S. ...	... Water Cartridges, &c.	128	Huntington, Professor ...	Instruction in Assaying	—
Lubrig Coal and Ore Dressing Appliances (Ltd.) ...	... Rock Drills	128	Ingersoll-Sergeant Drill Co. of America. Rock Drills and Compressors	102	
Novel's Explosives Co. (Ltd.) ...	... Rock Drills	128	Institute of Mines and Forests of British Guiana ...	101	
Pool, J. and F. ...	... Coal Washing Machinery	128	Jones, J. A. ...	Mining Engineer	101
Robey and Co. (Ltd.) ...	... Asbestos	128	Kitto, B. ...	Assay Office	101
Schram and Co. ...	... Coal Washing Machinery	128	Krupp Grusonwerk ...	Ore Extraction Machinery	—
Sheppard and Sons (Ltd.) ...	... Asbestos	128	Lambert's Wharfage Company ...	Mining Machinery	118
United Asbestos Co. (Ltd.) ...	... Metal	129	Larmouth, T., and Co. ...	Share and Iron Broker	101
Campbell-Johnston, R. C. ...	... Mining Engineer	101	MacLean, J. Grant ...	Stone Breakers and Ore Crushers	132
Cannock Chase Colliery Company ...	... Coal Exporters	101	McNeill's Code ...	Assay Laboratory	101
Fassel Gold Extracting Co. (Ltd.) ...	... MacArthur-Forrest Process	129	Marsden, H. R. ...	Aluminium	104
Champion Rock Borer Co. ...	... Rock Borers	130	Merton and Co. ...	Surveying and Mining Instrument	101
Charleton, A. G. ...	... Mining Engineer	101	Middleton, Richard J. ...	Water Cartridges, &c.	1.1
Clarkson-Stanfield Concentrator (Ltd.) ...	... Dry Concentration	105	Negratti and Zambra ...	Signal Bell	123
Companies and Legal Announcements ...	... Share Dealers	101	Nobel's Explosives Co. (Ltd.) ...	Buyers of Lead Ashes, &c.	115
Cornforth and Co. ...	... Explosives	101	Parkin ...	Bulls Metal, &c.	132
Cotton Powder Co. (Ltd.) ...	... Publishers	101	Pass and Son ...	Welded and Riveted Pipes	—
Cras and Gerlach ...	... Books on Mining	101	Piggott and Co. ...	—	—
Crosby Lockwood and Son's ...	... Mining Engineer	101	—	—	—
Davies, Henry ...	... Mining, &c., Instruments	105	—	—	—
Davies and Son ...	... Rock Drills	103	—	—	—
Daw, A. and Z. ...	... Metal	129	—	—	—
Delta Metal Co. (Ltd.) ...	... Metal	129	—	—	—

INGERSOLL-SERGEANT PISTON INLET COLD-AIR COMPRESSORS.

A. E. W. GWYN,
AGENT.

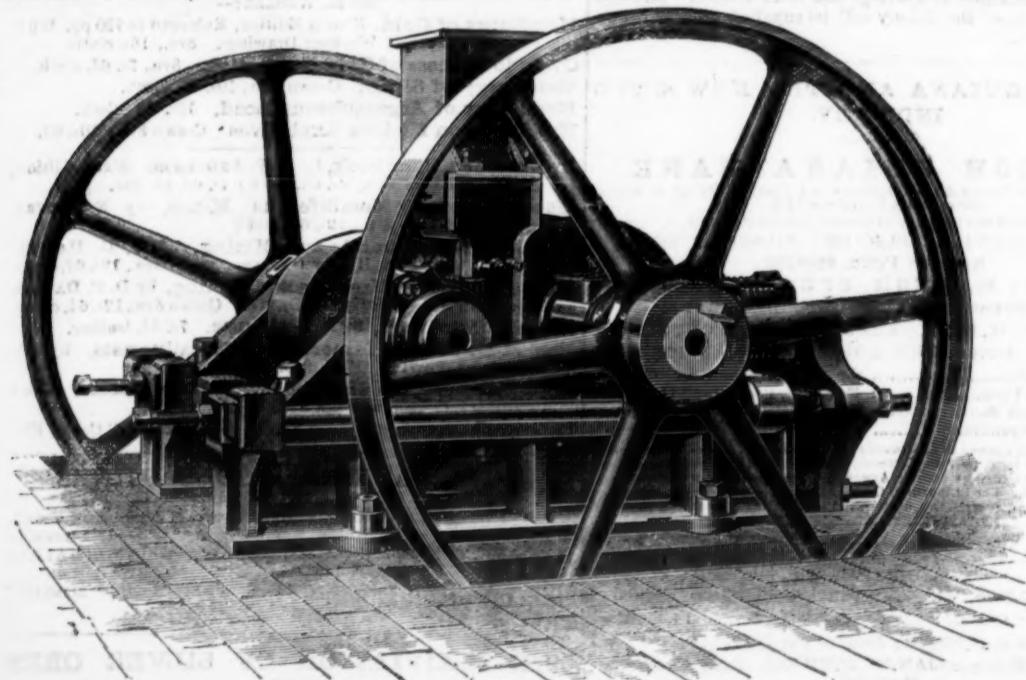


TELEGRAMS:
"ENYAM, LONDON."

**A HIGH DUTY AIR COMPRESSOR. STEAM OR BELT ACTUATED.
DUPLEX CORLISS AIR COMPRESSORS. DIAMOND and PROSPECTING DRILLS.**

Write for Catalogue.

THE INGERSOLL-SERGEANT DRILL CO., 114A, QUEEN VICTORIA ST., LONDON, E.C.



W. F. STANLEY

Mathematical Instrument Manufacturer
To H.M. Government, Council of India, Science and
Art Department, Admiralty, &c.

**MINING, SURVEYING AND DRAWING
INSTRUMENTS**

OF EVERY DESCRIPTION, OF THE HIGHEST QUALITY
AND FINISH, AT THE MOST MODERATE PRICES.
Price Lists post free.

Address—Great Turnstile, Holborn, London, W.C.

GOLD MEDAL, Inventions Exhibition, 1888

" Mining " 1890

THE SOUTH AFRICAN MINING JOURNAL.

PUBLISHED WEEKLY IN

JOHANNESBURG, TRANSVAAL.

The Journal has now entered its fifth year of publication. It is the recognised and official authority in South Africa on the mines of the country. It contains most reliable reports and information of the Gold Mining Companies of the Witwatersrand and Matabeleland. Full Share Market report with suggestions as to shares worth purchasing. Trade and commercial information which will be found invaluable to European manufacturers. World-wide in its circulation; has twenty times larger circulation in South Africa than any European financial paper published.

HEAD OFFICE, JOHANNESBURG, P.O. BOX 963.

Annual Subscription, 80/- payable in advance.

For Advertisements apply to London Agents,
STREET and CO., 80, Cornhill, E.C.

THE WESTERN DAILY MERCURY.

The Paper for News,
The Paper for Advertisements.
The Paper for the People.

THE WESTERN WEEKLY MERCURY

The Paper for the Household,
These Journals have an enormous circulation throughout Devon
and Cornwall, and are conveyed by specially chartered trains.

OFFICES: PLYMOUTH.

LIVERPOOL JOURNAL OF COMMERCE

Is the best FINANCIAL and COMMERCIAL PAPER

in the Provinces.

Is now Enlarged to Eight Pages.
Contains more Commercial and Shipping News than any other
Morning Paper.

Proprietor, CHARLES BIBCHALL, 29, Castle Street, Liverpool
LONDON OFFICE.—88, GRACECHURCH STREET.

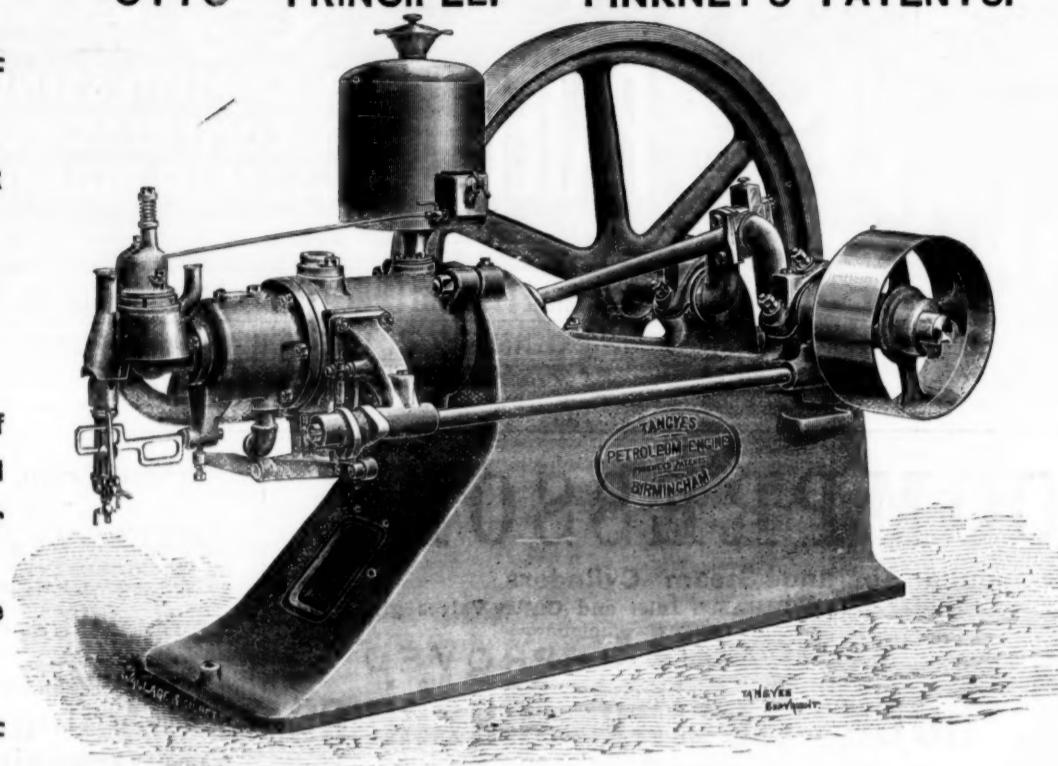
TANGYES PETROLEUM (OR OIL) ENGINE

"OTTO" PRINCIPLE. PINKNEY'S PATENTS.

Note.

The SMALL NUMBER OF PARTS and consequent SIMPLICITY.

The absence of FANS, PUMPS, and other Appliances for starting, or for introducing the Charge.

**Note.**

The RELIABILITY in Working under VARYING LOADS.

The Suitability for Working with ORDINARY PETROLEUM (Paraffin Lamp) OIL, otherwise called KEROSINE.

From a Photo of the 4-brake H.P. Engine.

SIZES NOW READY—1 TO 10-BRAKE HORSE POWER.

TANGYES LIMITED, Birmingham.

AND AT London, Newcastle, Manchester, Glasgow, Cardiff, Sydney, Johannesburg, Bilbao and Rotterdam.
Telegrams—TANGYES, BIRMINGHAM.

No. 1050.

THE "DAW" ROCK DRILL.

Highest Award, International Exhibition of Mining and Metallurgy, London, 1890

Highest Award and Medal, World's Fair, Chicago.

PATENT QUARRY BARS AND TRIPODS.
Improved Tunnel Columns.



On view at the Offices, where Catalogues, Estimates, and all Particulars can be obtained on Application.

A. & Z. DAW, Patentees and Sole Manufacturers, 11, QUEEN VICTORIA ST., LONDON, E.C.

Registered Telegraphic Address: "GULDNES, LONDON." A.B.C. Code. Fourth Edition.

Representatives in South Africa: Messrs. BROWN and MCKENZIE, Johannesburg.

Representative in Australasia: Mr. BENJ. K. MORTON, 97, Queen Street, Melbourne; 17, Post Office Chambers, Sydney.

From His Grace the Duke of Rutland.

Belvoir, Grantham,
December 1st, 1879.

SIR,—Elliman's Royal Embrocation is used in my stables; I think it very useful.

RUTLAND.

Master of the Belvoir Hounds.

From the Earl of Harrington.
January 9th, 1889.

SIR,—Elliman's Royal Embrocation is used in my stables, and I consider it the best that I can obtain. HARRINGTON.

Master of the South Wilts Hounds.

From Major M. J. Balfe,
South Park.

June 16th, 1892.

SIR,—Elliman's Royal Embrocation is used in my stables, and I can highly recommend it.

M. J. BALFE,
Master of the Roscommon County Staghounds.

ELLIMAN'S ROYAL EMBROCATION

"AN EXCELLENT GOOD THING."

BOTTLES 2/2 6/3 6 JARS 10/6 20/-

Prepared only by ELLIMAN SONS & CO SLOUGH, ENGLAND

ECONOMY IN THE STABLE.

USING ELLIMAN'S EASIER HAULAGE

From Lord Haddington, Tynningham, Prestonkirk, N.B. December 27th, 1885.

SIR,—Elliman's Royal Embrocation is used in my stables, and I consider it indispensable in any stable, but especially in the stable of a Master of Hounds.

HADDINGTON.

Master of the Berwickshire Hounds.

From R. Burdon Sanderson, Esq., Warren House, Belford. July 10th, 1892.

SIR,—Elliman's Royal Embrocation is used in my stables and I consider it very useful.

R. BURDON SANDERSON,
Master of Percy Foxhounds.

From Wm. J. Buckley, Esq., Penyfaw, Llanelli. July 16th, 1892.

DEAR SIRS.—I have much pleasure in recommending your Royal Embrocation. I always keep a stock in my stables and kennels. My farm bailiff has also found it of much value among his herd.

WM. J. BUCKLEY,
Master of Carmarthenshire Foxhounds.

Theodolites, Levels, Circumferentors, Miners' Dials, Compasses, Drawing Instruments, Levelling Staves, Barometers, Thermometers, Air Meters, Binoculars, Telescopes, &c., &c.

ILLUSTRATED PRICE LISTS AND ESTIMATES POST FREE TO ALL PARTS OF THE WORLD.

NEGRETTI & ZAMBRA, Scientific Instrument Makers to Her Majesty the Queen and British and Foreign Governments.

38, HOLBORN VIADUCT.
BRANCHES: 45, Cornhill, and 122, Regent Street, London.

EL MINERO MEXICANO.

The Mining and Industrial Journal of Mexico.

ESTABLISHED 1873.

Published in the City of Mexico every THURSDAY, in the Spanish Language.

Taken by Mine Owners, Capitalists, Manufacturers, Merchants, the richest and most liberal people, all over Mexico.

THE BEST ADVERTISING MEDIUM.
MEXICAN PATENT & TRADE MARK AGENCY.

A, Independencia No. 1, City of Mexico.

RICHARD E. CHISM, M.E., Editor and Proprietor.



WALKERS' PATENT INDESTRUCTIBLE VENTILATING FANS FOR MINES, TUNNELS, &c.
CONSTRUCTORS OF THE VENTILATING MACHINERY AT THE SEVERN AND MERSEY TUNNELS.

ANTI-VIBRATION SHUTTER
Applicable to all enclosed Fans.

WALKER & BROTHERS

WALKER & BROTHERS' PATENT AIR COMPRESSING ENGINES GAS COMPRESSING ENGINES BESSEMER BLOWING ENGINES

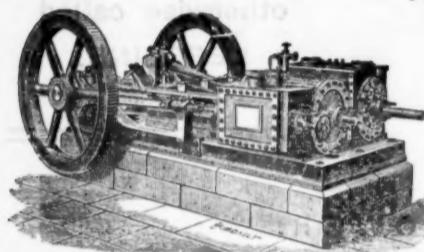
upwards of 400 of the above now AT WORK indicating in the aggregate 150,000 Horse-Power

Fisher & Walkers' Patent Friction Clutch & Underground Haulage Machinery
THIS GEARING IS NOW EXTENSIVELY IN USE FOR HAULAGE PURPOSES. *

The objects attained are SIMPLICITY, ENDURANCE OF THE MACHINERY AND ROPES with a MINIMUM EXPENDITURE OF POWER.

AIR COMPRESSORS

With Compound Air and Steam Cylinders,
Fitted with SCHRAM'S Inlet and Outlet Valves giving the greatest efficiency.



SCHRAM'S IMPROVED Rock Boring Machines.

Supplied to the Indian, Colonial, and other Governments.
2500 IN USE in all PARTS of the WORLD.

DIAMOND PROSPECTING DRILLS.

"OPTIMUS" COMPOUND ROCK DRILL.

(P. J. OGLE'S PATENT.)

Consumes 40 per cent. less Compressed Air than any other Drill at the same time giving the most effectual results.

ESTIMATES AND FULL PARTICULARS ON APPLICATION.

RICHARD SCHRAM & CO., 17a, Great George Street, Westminster, S.W.

TELEGRAMS: "SCHRAM, LONDON," A1, A.B.C. and The Engineering Telegraph Codes Used.

Telegrams—Green, Foundry, Aberystwyth.

SILVER MEDALS AWARDED AT THE ROYAL CORNWALL POLYTECHNIC, 1872 & 1876; GOLD MEDAL AWARDED AT THE GREAT INTERNATIONAL MINING EXHIBITION, CRYSTAL PALACE, 1890.

ONLY AWARDS GIVEN FOR CONCENTRATION PLANTS

GEORGE GREEN'S PATENT Self-Acting or Automatic Ore Dressing Machinery,

A Special Plant, on a reduced scale, has been erected at the Works by which samples of METALLIC ORES—up to Five Tons may be treated, and the commercial value determined, in this way the most suitable arrangement of Plant is ascertained, a considerable advantage to intending Purchasers of Crushing and Concentrating Plant.

GOLD STAMP AND OTHER MILLS.

GEORGE GREEN,
THE FOUNDRY, ABERYSTWYTH.

For PURE ALUMINIUM

98 to 99 $\frac{1}{2}$ per cent. (98 per cent. minimum guaranteed) in

INGOTS, STICKS, & ROLLING SLABS;

ALSO FOR
SHEETS, &c., AND
FERRO-ALUMINIUM.

APPLY TO

HENRY R. MERTON & CO.,

2, Metal Exchange Buildings, Leadenhall Avenue.

LONDON, E.C.

AGENTS FOR THE BRITISH ALUMINIUM COMPANY, LIMITED.

A. & J. STEWART and CLYDESDALE, Limited.

Glasgow, Coatbridge, and Mossend.

WROUGHT IRON WELDED TUBES and FITTINGS for GAS, WATER, and STEAM.

Light Lap-welded Wrought-iron and Steel Tubes

(SPECIAL ADAPTED FOR MINES).

With Patent Flanged Joints (as illustrated) for the Conveyance of Water, Steam, and Air, at High and Low Pressures.

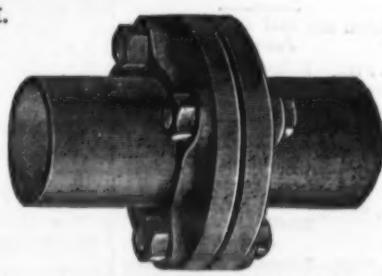
LAP-WELDED IRON AND STEEL BOILER TUBES

FOR LOCOMOTIVE, MARINE, AND OTHER MULTITUBULAR BOILERS.



SECTION OF PATENT FLANGED JOINT

STEEL & IRON PLATES FOR BOILERS, BRIDGES, &c.



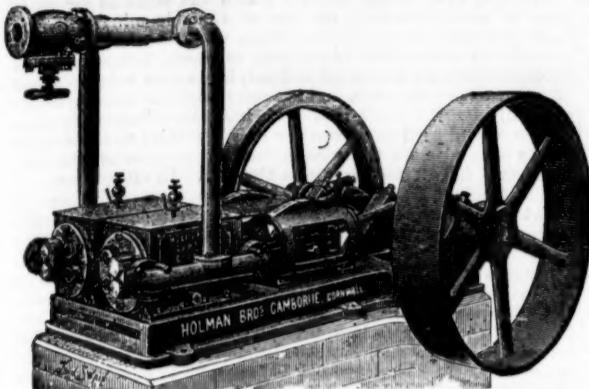
PLAN OF PATENT FLANGED JOINT.

Head Offices: 41, OSWALD STREET, GLASGOW.

HOLMAN Bros., Camborne, Cornwall.

ESTABLISHED 1839.

**Patentees and Sole Makers of
"THE CORNISH" ROCK DRILL and "THE CORNISH" COMPRESSOR.**



RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, TWELVE MEN with TWO new Patent C^ORNISH R^OCK D^RILLS drove, sunk, and rose 288 FATHOMS in 12 MONTHS, equal to five times the Speed of Hand Labour

At Wheal Grenville Mine, Camborne, Cornwall, SIX MEN with TWO new Patent C^ORNISH R^OCK D^RILLS started from the 150 FATHOMS level and put up in EIGHT MONTHS a 11 FEET by 5 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES, and about midway drove 1 FATHOM 5 FT. No communication of any kind was effected until hoisting to the Shaft brought down from surface.

Estimates for ROCK BORING PLANT and GENERAL MINING MACHINERY on Application.

London Offices: 7 and 9, LEADENHALL BUILDINGS, E.C.

FIRST
SILVER MEDAL,
Highest Award,
Mining Institute
Contest, 1881.

Three Makers
represented.

AWARDED SILVER MEDAL INTERNATIONAL
INVENTIONS EXHIBITION, 1885.

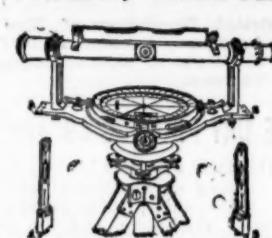
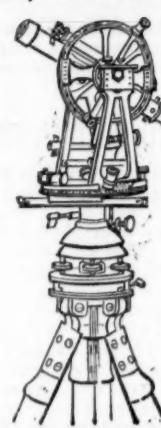


FIRST
SILVER MEDAL
Highest Award,
Royal Cornwall
Polytechnic
Jubilee Exhibition
Contest, 1882.

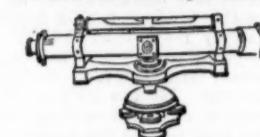
Five Makers
represented.

JOHN DAVIS AND SON,

ALL SAINTS WORKS, DERBY;
118, NEWGATE STREET, LONDON.



Davis's Improved Hedley Dial, with
Telescope and Sights Interchangeable,
and Patent Hoffman Tripod Head.



Transit Theodolite with Patent
Hoffman Tripod Head, and
Trough Compass.

Dumpy Level with
Hoffman Patent Tripod Head.

MINING, SURVEYING, AND ENGINEERING INSTRUMENTS.

THEODOLITES. LEVELS. TACHEOMETERS.

Davis's Improved Hedley Miners' Dials, with
HOFFMAN PATENT TRIPOD HEAD;
AND ALL DESCRIPTIONS OF MATHEMATICAL AND
MINING SURVEYING INSTRUMENTS.

Revised Illustrated Catalogues Free to any Part of the World.
SECTION (A) MATHEMATICAL DEPARTMENT AND SAFETY LAMPS
SECTION (B) ELECTRICAL DEPARTMENT.

Gold Medal Awarded Mining Exhibition, 1890.
A. B. C. CABLE CODE, 4TH EDITION.

AWARDS: CRYSTAL PALACE, 1890; TASMANIA, 1891; KIMBERLEY, 1892.

CONCENTRATION.

The Clarkson-Stanfield Concentrator (Limited).

In the CLARKSON-STANFIELD process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

OUTPUT ½ TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.
CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS

6, COLONIAL AVENUE, MINORIES, LONDON, E.

The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their CLARKSON-STANFIELD plant working on a Refractory Low Grade Gold Ore.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

- 438 Thomas Potterton, 122, Cavendish Road, Brixton, London.—An improved safety valve for boilers.—January 7.
- 478 Oscar Ernest Morse, 53, Chancery Lane, London.—Improvements in rotary engines.—January 7.
- 545 Alexander Louis Pouget, 46, Lincoln's Inn Fields, London.—Improved speed indicator and recorder, particularly intended for use on locomotive engines.—January 8.
- 549 William Blackmore, 3, Strand-on-the-Green, Millhouse, Sheffield.—The treatment of antimonial and arsenical ores, materials, or furnace products containing gold, silver, or platinum.—January 8.
- 551 Llewellyn Birchall Atkinson, 1, Queen Victoria Street, London.—Improvements in dynamo-electric machines and motors.—January 8.
- 578 G. R. Bagnall and Ernest Edward Baguley, the Castle Engine Works, Stafford.—Locomotive to run on various gauges.—January 8.
- 622 Harley Hugh Dairymple-Hay, 24, Southampton Buildings, Chancery Lane, London.—Improvements in tunnelling and tunnelling apparatus.—January 9.
- 625 Thomas Hedges Deakin, Frederick Samuel Gest, and David Powell, 19, Southampton Buildings, Chancery Lane, London.—Improvements in wheels for colliery trucks, tramcars, tram-tubs, carros, and four-wheeled running on axles or spindles, and other similar purposes.—January 9.
- 641 Richard Sloane Richards, 323, High Holborn, London.—Improvements in or relating to the application of fuel to furnaces.—January 9.
- 749 William Henry Taylor, Abbey Hey, Gorton, Manchester.—Improvements in concussion nuts or collars for rock drills and other machinery or appliances.—January 11.
- 759 George Robertson Hislop, 62, St. Vincent Street, Glasgow.—Improvements in apparatus for revolving spent hones, and for calcining ores or like material.—January 11.
- 771 Max Seipp, 59, Chancery Lane, London.—Process and apparatus for the complete combustion of coal dust, of different sized particles in coal dust or gas furnaces that may be immediately stopped.—January 11.
- 785 Joseph Franklin Batchelor, 15, Livingstone Street, Brooklyn, U.S.A.—An improved valve controlling device.—January 11.
- 786 Michael Holroyd Smith, 25, Chancery Lane, London.—Improvements in gas and oil engines, part of same being applicable to steam engines and the like.—January 11.
- 794 Herbert John Dowling and Henry Sheeley Keating, 28, Southampton Buildings, Chancery Lane, London.—A new or improved electric lamp.—January 11.
- 795 Charles Denton Abel, 28, Southampton Buildings, Chancery Lane, London.—Means for cooling the inlet valve of gas and oil motor engines.—January 11.
- 801 Jules Prosper Gauthier, Nestor Henriet, and Antoine Jourdanet, 18, Buckingham Street, Strand, London.—An improved construction for rendering fluid-tight the rotary joints at the trunnions of hollow, oscillating, or rotary cylinders and the like.—January 11.
- 803 William Ross, 16, Buchanan Street, Glasgow.—Improvements in and relating to fluid pressure, reducing or regulating valves.—January 11.
- 804 John Gourlay, 96, Buchanan Street, Glasgow.—Improvements in safety valves for domestic and such like boilers.—January 11.
- 811 Frederic William Walker, 24, Southampton Buildings, Chancery Lane, London.—Improvements in refrigerating machinery.—January 11.
- 817 Henry Harris Lake, 6, Southampton Buildings, Chancery Lane, London.—Improvements in sifting machines.—January 11.

A SPECIALLY endorsed writ has been issued on the suit of Mr. W. F. Regan against Mr. Henry Hess for alleged libel venue Court of Queen's Bench.

JOINT-STOCK COMPANIES.

NEW REGISTRATIONS.

THE following are among the joint-stock companies registered at Somerset House since our last notice:—

- General Banking and Mining Corporation (Limited).—Registered January 12 by J. H. Farmer, 28, Austinmer, E.C. Capital £500,000, divided into 500,000 shares of £1 each. Objects: To undertake and carry on any business undertaking, transaction or operation, commonly carried on or undertaken by contractors for public or other works; also as bankers, capitalists, company promoters, financiers, concessionaires, traders, carriers, merchants, brokers, importers, and exporters, printers, publishers, manufacturers, prospectors, advertisers, and any other business which may seem to the company capable of being conveniently carried on or calculated directly or indirectly to be profitable to the company.
- Consolidated Gem Group of Murchison Gold Mines (Limited).—Registered January 11 by Harwood and Stevenson, 31, Lombard Street, E.C. Capital £10,000,000 in £1 shares. Objects: To adopt and carry into effect certain agreements, the parties to which are not named; to acquire any mines, mining, water and other rights, grants, leases, claims, concessions, options of purchase, metalliferous land, estates, hereditaments, farms, and other property in Australia or elsewhere; to develop and turn to account such property in such manner as the company shall see fit; and to carry on the business of a mining and smelting company in all its branches.
- Half-Mile Reef (Limited).—Registered January 15 by Ashurst, Morris, Crisp, and Co., 17, Throgmorton Avenue, E.C., with a capital of £150,000 in £1 shares. Object: To adopt and carry into effect an agreement bearing date December 12, and made between the Devon Westralian Mining and Prospecting Syndicate (Limited) of the first part, G. F. Farrar of the second part, J. Orister of the third part, and J. W. Jeffries, on behalf of this company, of the fourth part, to acquire any gold or other mines, mining, water, and other rights, grants, leases, claims, concessions, options of purchase, &c., in West Australia or elsewhere, to develop and turn to account the same in such manner as the company may see fit, and to carry on the business of a mining, smelting, and metallurgical company in all its branches.
- Rose Hill United Gold Mines (Limited).—Registered January 16 by G. H. Allen, 71, Fairbridge Road, Upper Holloway, N., with a capital of £175,000 in £1 shares. Object: To adopt, enter into, and carry into effect such agreements or contracts as from time to time may be agreed upon between this company and the other parties thereto; to acquire lands, estates, mines, grounds, options, mining, water and other rights, grants, leases, claims, concessions, metalliferous land, &c., in West Australia or elsewhere, to prospect and explore the same for precious stones and minerals, and to carry on business as miners and smelters generally.
- J. R. Wood and Co. (Limited).—Registered January 17 by T. S. Jones, 70, Gracechurch Street, E.C., with a capital of £60,000 in £10 shares. Object: To acquire, by purchase or otherwise as a going concern, the business of a coal merchant, &c., as hitherto carried on by J. R. Wood under the style or firms of Wood and Co., British Patent Coke Company, and Handell and Co., respectively at London, Southwark, and Portman, and to carry on the terms of an agreement dated January 14, 1895, and made between J. R. Wood of the one part, and C. Reader, on behalf of this company, of the other part, and, generally, to carry on in all or any of their respective branches, the businesses of coal and coke merchants, colliery owners, coal miners, ironmasters, stone merchants, quarry owners, &c.
- Thames Hauraki Gold Fields (Limited).—Registered January 17 by Morgan, Price and Mewburn, 32, Old Broad Street, E.C., with a capital of £200,000, divided into 300,000 shares of £1 each. Object: To acquire certain mining property, mining, water and other rights, interests, grants, leases, claims, concessions, benefits, licences, &c., relating to mines at Hauraki, in the Aroha district in the colony of New Zealand, in accordance with an agreement expressed to be made between the Austinfriars Finance Syndicate (Limited), of the one part and this company of the other part; generally, to get, win, work, raise, crush, manipulate, and prepare for market gold and other metals and minerals.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

* * We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Coal, January 27 (Mountain Ash, Wales).—For the supply of best coal to the Town Hall and to the infectious disease hospital, to be delivered in trucks of about 7 tons at the railway stations at Mountain Ash, for the Urban District Council. Contractors may tender at prices inclusive of delivery at the Town Hall and hospital. The quantity used during the year ending March 31, 1895, was about 50 tons. Tender pre-paid and endorsed "Tender for Hause Coal" to be sent to Mr. H. Phinot, clerk, Town Hall, Mountain Ash.

Coal, January 27 (Stockport).—For the supply of engine slack and house coal for the bath, hospital, and office for six months for the sanitary committee. Particulars of quality and quantity may be obtained on application at the Baths, St. Petergate. Contractor to state name of coal in tender. Tenders to be delivered at the office of Mr. Walter Hyde, town clerk, on or before noon on 27th inst., endorsed "Tenders for Coal," and addressed to the Chairman of the Baths Committee.

Steel Cargo Barges, January 29 (London, S.W.).—The Crown Agents for the Colonies, acting on behalf of the Uganda Railways Committee, invite tenders from manufacturers for the supply of steel cargo barges, specification and forms of tender for which can be obtained on application to the Crown Agents for the Colonies between 10 a.m. and 4 p.m. (Saturday 10 to 2). A charge of £1 will be made for each specification. Tenders to be delivered in sealed envelopes, addressed to the Crown Agents for the Colonies, Downing Street, S.W., and endorsed "Tenders for Steel Barges, Uganda Railways."

Lead, January 31 (Brigstock).—For the supply and delivery, carriage paid, at Brigstock railway station or Mill-i-ane gasworks of 5 tons of virgin lead for the Water Committee. Sealed tenders, endorsed on the outside "Pig Lead," are to be sent in by 31st inst., addressed to the Town Clerk, Public Offices, Brigstock.

Mineral Oil, January 29 (Bucharest).—For the supply of 60,000 kilogrammes of mineral oil. Particulars from the Direction of the State Railways, Bucharest.

Bridge, March 8 (Bucharest).—For the construction of a wooden bridge over the River Dornic, Estimate, 82,801 francs. Particulars from the Ministry of Public Works, Bucharest.

River Works, March 10 (Bucharest).—The Romanian Ministry of Public Works, Bucharest, invite tenders for river conservation and defence works on the banks of the Trotus. Estimate, 52,329 francs.

MINING IN NEWFOUNDLAND.—It is said that asbestos mining is likely to become an important industry of Newfoundland in the near future. Next year, says the Canadian Colliery Guardian, will witness an active development of these deposits, regarding which there are sanguine expectations. It is reported that gold-bearing quartz has been discovered at Ferryland, south of St. John's. Reports of this kind require confirmation, but already numerous claims have been taken up on the faith of the alleged discovery. The new coal field is to be worked next year, and if it should prove remunerative, as there are the strongest grounds for believing, it will furnish employment to a large number of persons.

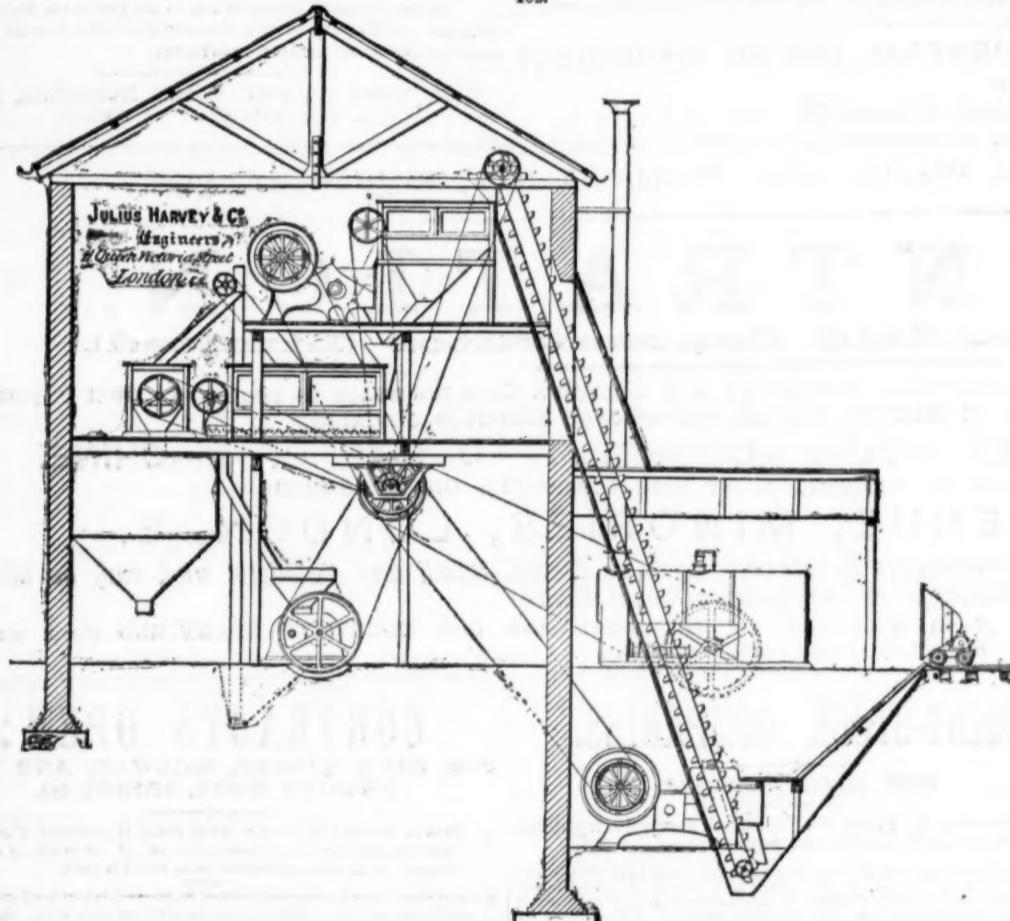
MECHANICAL ENGINEERING: MACHINERY, MINING and RAILWAY PLANT, &c.

Illustrated Descriptions of New and Standard Mechanical Appliances, Accessories and Processes, adapted to Mining, Metallurgical, Railway, Engineering and other Industrial Purposes.

THE DRY PROCESS AS APPLIED TO GOLD MINING.

THE more extended introduction of the dry process in gold mining in connection with the leaching process, particularly with cyanide, has necessitated the production of new and improved machinery, and has given a considerable impetus to English and foreign mining engineers. This will be readily appreciated when we mention that by the wet process with stamp batteries and amalgamation, as hitherto employed in mines where the precious metals are finely diffused throughout the ore, rarely more than 25 to 30 per cent. can be saved, and although by adding pans this may, at considerable expense, be increased, even then it rarely exceeds with the two operations 60 per cent. By the dry process, however, with crushing rolls, followed by efficient leaching, it is proved that over 90 per cent. of the gold may be recovered. It will, therefore, we feel sure, be of considerable interest to our readers at the present time to have particulars before them of some of the most modern and improved machinery that can be obtained. We have the opportunity of giving in this number an illustration of a very complete plant of quartz crushing and dressing machinery, designed on the very latest principles.

It will be seen, on reference to the drawing, that the quartz as brought in trucks to the reduction mill is first tipped on what is termed a grizzly, from whence it is fed into a stone breaker; this machine, with its powerful jaws, reduces the large lumps of quartz as it comes to the mill into pieces about the size of an egg; this broken material is then taken up to the top of the building by an elevator, and passing through



a rotary screen where it is sized, enters a second and smaller stone breaker, which still further reduces the quartz to about the size of a nut. The quartz, thus twice broken, next enters a second screen, which takes out a certain proportion of the powdered ore. That portion of the ore, too large to pass through the screen, is then conveyed to the crushing rolls, which, in fact, perform the main and chief part of the operation. These rolls have a smooth hard surface, and the finely broken quartz is passed through the rolls until it is reduced to a properly crushed and powdered condition. The product from the rolls is now taken by a small elevator to the third or finishing screen, which may have perforations of any desired fineness, and on leaving this third screen the quartz is delivered in a perfectly powdered condition ready for concentration or leaching by the cyanide or other process. An important feature in this arrangement is that any product too coarse to go through the third screen is returned to the rolls and so crushed again, until sufficiently fine to be passed by this screen to the hopper receiving the completely finished ore.

The whole of the machinery is driven by a compound steam engine of the undertype pattern, fitted with patent automatic governor expansion gear and all the most recent improvements. The plant we illustrate is capable of dealing with 1 ton to 1½ ton of quartz per hour, or (say) 25 to 35 tons per day of 24 hours, the finished product passing through a 40 mesh—that is to say, a screen or sieve having 1600 holes to the square inch. It will be seen that manual labour is almost entirely dispensed with from the time the rough quartz is fed into the stone breaker to the time it is delivered in a finished condition from the third screen.

The plant we have described has been designed by Messrs. Julius Harvey and Co., 11, Queen Victoria-street, London, E.C., and has met with the approval of practical mining gentlemen from the colonies.

We should mention that larger arrangements are supplied with two or more sets of rolls, as also any other class of machinery that may be necessary to suit the special requirements of clients, or the particular nature of the quartz to be operated upon.

Messrs. Julius Harvey and Co. have also issued a very useful and effective catalogue of mining machinery, an advance copy of which has been sent us for perusal.

QUICKSILVER MINING IN THE DISTRICT OF GUADALCAZAR, STATE OF SAN LUIS POTOSI, MEXICO.*

By HENRY F. COLLINS.

(Continued from page 78.)

Cost of Mining.

A LL work at Guadalucazar, except the actual stoping of the larger ore bodies, is done by contract, the ordinary system, in which all the six men taking a given "pitch" share equally in the profits, being usually, though by no means invariably followed. The standard sizes of development workings at Guadalucazar in 1894 were shafts 2·50 by 1·50, air winzes 1·25 square, main levels 2·00 by 1·75, and exploratory and ventilation connections 1·75 by 1·25—all in metres. Owing to the usually soft character of the rocks, all contracts were measured up weekly and reset by the superintendent engineer, and if any great change took place in the rock during the week a fresh bargain was made either by the engineer or the chief foreman on his behalf. The following prices were paid for dead-work:—

SINKING.—Full size 2·50 by 1·50. Per metre, inclusive of steel, powder, and candles, but exclusive of hoisting and timbering when necessary, which were paid for by the company.

Gypsum, \$12 to \$15; (say) 30s. to 37s. 6d.
Fissured limestone | \$10 to \$12; (say) 25s. to 30s.
Cueco

Hardest compact siliceous limestone, \$18 to \$20; (say) 45s. to 50s.

DRIVING.—Full size 2·00 by 1·75. Inclusive of powder, steel, and candles, but exclusive of tramping and of timbering where necessary.

Cueco, if soft, \$5 to \$6; (say) 12s. 6d. to 15s.
" if hard and cemented, \$7 to \$9; (say) 17s. 6d. to 22s. 6d.

Gypsum, \$11 to \$13; (say) 27s. 6d. to 32s. 6d.
" mixed with hard limestone, \$14 to \$16; (say) 35s. to 40s.

visits the "pitch" daily to look after the disposal of the deads, safety of the roof, &c. All the ore these tributors get is weighed and assayed weekly, and bought on the above sliding scale, which gives the mine about one-third of the net value of the ore to cover profit and proportion of general expenses, &c., besides hoisting and tramping charges; for, as already stated, all ore and deads brought to one of the main shafts or shot down to the main level is brought to surface for account of the mine, and not of the several parties of contractors.

Treatment of the Ore.

The ore, after being selected inside the mine as far as is possible without risking the loss of valuable mineral in the waste left behind, and used for filling, and still containing from one-fifth to three-fifths of its bulk as waste, is trammed out through the main tunnel (Zero level) in wagons holding about 12 cwt. to 15 cwt. each, and is tipped over bar screens, which allow all pieces under ¼ inch in their smaller diameter to pass. In the case of hard quartzose ore only one-third to one-fourth of the whole passes the screen, but in the case of the soft black ores fully two-thirds goes through. In either case, the smaller (called "tierras") go direct to the furnace bins, except that the larger pieces of waste are picked out by hand, while the coarse ore ("granzas") is first subjected to a cobbing and picking process to get out as much waste as possible, and is then run through a small stone-breaker set at about ¼ inch mesh, which allows thin flat pieces of much larger size to go through. From the stone-breaker the ore falls direct into a tram wagon, which then takes it to the furnace bins, into which it is tipped direct. The furnace bins are divided by wooden partitions into numbered spaces about 6 feet in length by 10 feet wide by 5 feet high, each of which contains the quantity of ore treated by one furnace in 12 hours, the ore being weighed on its passage from screens or crusher to the bins. The composition of the furnace charges is kept as uniform as possible by the yard foreman, whose duty it is to make up at the same time several of the bin-heaps (called "tequios") weighing each such proportions of ores of different richness as will roughly represent the average output of the mine during each given week—a very important matter when ores coming from different places on the same day may be as poor as 0·6 per cent., and as rich as 6 or 7 per cent. respectively. The ore is sampled in duplicate by the split-shovel and quartering system and assayed daily, the first, or yard ("patio") sample representing the whole of the ore from each different level or stope in the mine, which has gone to the furnace bins in any given day—the "tierras" being sampled separately from the "granzas" in the case of hard ore—while the second, or bin ("tequio") sample, is taken from the weighed heaps themselves by the split-shovel method. The composition of each "tequio" is calculated from the weighed quantities of ore used in forming it according to the figures shown by the first or yard-sample; and in case the discrepancy between the direct sample and the calculated result is more than 0·2 per cent., the heap is turned over again and resampled, the mean of the results being in all cases adopted for the furnace accounts.

After sampling, the proper quantity of quicklime is added to each "tequio," none being required in the case of the so-called "poor" ores (i.e., under 1½ per cent.), where the quicksilver occurs as simple sulphide, red or black, 5 per cent. of the weight of the ore in the case of ores from 1½ to 3 per cent., and 10 per cent. in the case of ores over 3 per cent. where part of the quicksilver, at least, is in a state of complex sulpho-selenides, which are not so readily decomposed by simple oxidation.

The furnaces employed were designed by Mr. Jas. MacTear, one of our Vice-Presidents. They are of the muffle type 20 feet long by 9½ feet to 12 feet wide, built with arches of firebrick and soles of chequered fire tiles closely laid in fire clay. The ore is charged by means of a hopper and iron pipe passing through the arch at one end of the furnace, and is discharged through iron pipes connected with the door frames at the other end. The working doors were at first placed at the sides, but it has been found more convenient to put them in the ends of the muffle, while the iron pipes for the mercury vapours, at first placed horizontally and low down near the muffle bed, are now set in an almost vertical position close up against the arch, which, instead of lying flat horizontally in the direction of its length, has a slight rise given to it towards the vapour pipes. These, and other modifications, have resulted in increasing the capacity of the furnaces and diminishing the loss of fumes at the furnace doors while raking, at the same time that the fuel cost per ton treated has been very considerably reduced. The condenser system of each furnace consists first of a pair of "dust boxes" made of cast-iron plates bolted together with a rust joint of plaster of Paris, or of mortar made with fine sand and iron borings, each being 3 feet by 3 feet and 6 feet high inside; and secondly, of a double series of 12 oblong cast-iron condensers in six pairs, of a modified Czermak type, being composed of cast-iron plates put together like the dust boxes, and forming an oblong instead of an oval, the whole standing on a strong cast-iron bed-plate formed of sections bolted together and supported on a framework; the lower ends of each pair of condensers being funnel-shaped, and the openings of each series sealed by a water-trough. Beyond these iron condensers is a series of small brick condensers, after passing through which the vapours are conducted direct to the chimney.

It has been found advantageous to charge in such quantity that the stratum of ore on the sole of the muffle shall not exceed 2½ inches in thickness. Poor ores (i.e., those under 1½ per cent.), in a stratum of this thickness, readily give off the whole of their quicksilver in 2½ to 3 hours without being turned over, but with richer ores it is found that mere raking (unless very thorough, in which case it is extremely laborious, and causes much loss of quicksilver at the open doors) is insufficient to enable the lowermost layer to get sufficient oxygen for complete decomposition; and, therefore, it is better to work the furnaces on such ores in two hearths or beds, allowing each charge to remain for two hours on the first bed, and then pushing it forward to the finishing bed, where it receives a higher heat during a second period of two hours, and this turning over brings the lower layer to the top much more perfectly than any mere stirring would do.

All the ores (especially the gypseous varieties) increase in volume during the calcining operation, most of the fluor spar and barytes decomposes, the gypsum becomes anhydrous, and any limestone present becomes caustic lime; the quartz, however, is unaltered. Rich ores, both sulphides and sulphoselenides, often show a tendency to cake in the furnace, and as they contain a large proportion of fine powder, are always heavy to work; poor quartzose ore, on the other hand, being mostly in angular fragments, packs and offers great resistance to the tools, besides wearing out the tiles of the furnace bed very quickly. The practice of mixing these two classes of ore in the binheaps whenever possible is, therefore, found to facilitate greatly the handling of the ore in the furnace, besides securing more uniform condensation and production of mercury, and calling for less interference with the draught and other arrangements on the part of mere working foremen, to whom it is unsafe to entrust such adjustments on account of their inability to comprehend the far-reaching effects of slight alterations.

Admixture of quicklime with the richer ores is found to have other advantages besides that of facilitating the expulsion of

* A paper read at the recent meeting of the Institution of Mining and Metallurgy.

mercury from them. The richer ores, containing as they do notable percentages of sulphur and selenium, by simple oxidation, produce quantities of sulphurous, sulphuric, and selenious acid gases, which in the cooler and milder parts of the condenser system attack the iron very fast in spite of such temporary protection as is afforded by coating them with boiled coal-tar asphalt. The admixture of lime with the ore to a considerable extent prevents the escape of acid vapours, besides which the fine powder of lime which is raised by the stirring and carried over with the mercurial vapours, helps to make the soot alkaline or much less acid, and facilitates the running together of the fine mercury globules.

The largest part of the quicksilver is obtained in a clean state from the dust boxes into which the down-takes from the furnace vapour pipes lead, the temperature here, though low enough to permit condensation of most of the quicksilver, being sufficiently high to prevent the condensation of aqueous vapour, and to enable the vast majority of the quicksilver globules to run together into a pool beneath the layer of fine ore (and lime) dust carried over mechanically. The clean quicksilver, both from the dust boxes and condenser troughs, is flasked off direct, after being filtered through cotton cloths, while the dust, together with the mud from the troughs, is placed in the "pilas" or cemented tanks at one side of the dust boxes. It is brought to the consistency of stiff mud by adding water if too dry or wood ashes if too wet, and is worked over by a man alternately spading and treading till most of the mercury has run off into the bowl-like depression in the bottom of the tank, whence it is dipped into the flasks. During the process a strong smell of ammonia is noticeable, arising no doubt from the action of the caustic lime and ashes on the ammoniacal salts produced by the destructive distillation of organic matter in the ore.

Occasionally a small quantity ($\frac{1}{2}$ to $\frac{1}{2}$ ounce) of sodium amalgam dissolved in excess of quicksilver is sprinkled over the mass with the idea of cleaning the finer globules and helping them to coalesce; but it is not found to be generally required, and, after a final treading of the mud with more wood ashes, it is taken to the washing tanks in the mercury house, where it is panned in "bateas," or flat conical dishes cut from a solid block of "mesquite," an acacia indigenous to Mexico. Here the ore dust, lime, and ashes are quickly panned away, leaving a mud of exceedingly fine globules of floured quicksilver, prevented from coalescing by the film of water separating them. Kneading this floured quicksilver in a wooden trough with wood ashes or plaster of Paris, the water is absorbed, together with any thin tarnish of sulphide or sub-oxide on the surface of the globules, which almost instantaneously form a pool of liquid quicksilver, which is flasked.

The residues from this operation, together with the mud taken from the bottom of the panning tanks, is re-washed by hand on a fixed incline table built of bricks laid in asphalt upon which the mud is spread, and washed down gradually by means of water thrown up with a horn from a shallow tank at the foot. This apparatus, called a "planilla," is in common use all over Mexico for concentrating fine sand and slimes, and gives a clean rich product after a final panning, its great advantage being that the very small quantity of water necessary is used over and over again almost without loss—a desideratum where absolutely no water is to be found in the immediate neighbourhood, and the supply, even for drinking purposes, has to be brought many miles in barrels on mule-back. The final residues from this re-washing, which still contain from 4 to 10 per cent. of quicksilver (partly metallic but mostly as suboxide, which decomposes gradually on exposure to sunlight), are partially dried, made into balls by hand, and added to the ore charge.

(To be continued.)

MINING AND METALLURGY OF QUICK-SILVER IN MEXICO.

By JAMES MACTEAR.

Part III.

(Continued from page 65.)

Deposits in the State of San Luis Potosi.

GUADALCAZAR MINES.

As already stated, the Guadalcazar Quicksilver Mines were the only ones which succeeded in earning the Government premium of \$25,000, offered in the year 1843, to the first four producers of 2000 quintales of quicksilver in one year; this fact being sufficient to show the importance of the district in regard to the quicksilver deposits in Mexico.

The town of Guadalcazar itself lies in a large valley, some 70 miles north-east of San Luis Potosi, the capital of the State of the same name. The district consists of a series of plains and mountain ranges, the chief rock being limestone, forming rounded hills. Many of these seem to have been covered by gypsum deposits, forming a crust entirely covering and disguising the presence of the limestone. A lofty mountain of porphyritic rock breaks the run of limestone hills, and in this porphyritic rock large quantities of silver ore have been found. Many parts of the country are covered with stones and boulders of magnetic iron, and signs of volcanic disturbances are plentiful.

The line of the known deposits of quicksilver runs irregularly in a north-west direction from the town of Guadalcazar, and is entirely in the limestone formation. No quicksilver has as yet been met with in the main porphyritic rocks, but it has been found associated with gypsum, limestone, quartz, fluorite, stannite, minerals, and orpiment; while crystalline sulphur is found, although rarely.

Starting from Guadalcazar, and following the line of the deposits, a number of abandoned workings can be traced, of which little or nothing is now known.

Then comes the San Antonio Mine, a series of enormous open cast workings, of which four resemble volcanic craters, the ore from which has been chiefly of the soft variety. The lowest point of the workings or rather "burrows," at the bottom of one of these large excavations, must have been nearly 100 yards below the surface level. The irregular character of the fissures would be well seen in a great number of detached workings, the clayey-like mass in which the quicksilver ore is found having been extracted. The fissures varied very much in size, in some cases the width being some metres; in others the seams were comparatively narrow, the whole forming a sort of magnified "stockwork."

At the time of the author's first visit to this district, in 1890, this group of small mines was still being worked under Mexican management, the soft earthy ore being extracted from the very bottom of the workings, and laboriously carried up in bags by Indians along narrow paths cut in the sides of the main excavations. It was then pounded by lads between two stones, dried in the sun, and distilled in the usual Mexican furnace in small

clay retorts. (Photographs of the furnaces and the various operations are on the table.)

Specimens of the ore then being treated, on being tested, were found to contain only 0.3 per cent. of quicksilver.

The workings did not prove remunerative, and after lying idle for a year or two, the San Antonio and another mine was, sometime ago, acquired by a Mexican company, and re-named the Nuevo Potosi, and, under the direction of Mr. W. H. Rundall, formerly assistant engineer at the Guadalcazar Mine, the deposits here are being vigorously exploited. The workings are carried to a depth of 85 metres, and an adit is being driven from the side of the cañon at a depth of 130 metres, with the view of attacking the ore deposits from below.

The result of the recent working has been to show that the quicksilver ore exists in two forms; one in which crystalline cinnabar exists in the limestone itself in small spots or patches, the main body of the stone being comparatively free from ore; the other forming the main ore body of the mine lies in the clay filling of the fissures of the limestone, sometimes intimately mixed with it, and sometimes concentrated in richer bodies on the side walls of the fracture which has been filled with clay. This clay is often found to contain fragments of a shale or shaly limestone, which almost invariably carries quicksilver. The limestone walls of the fissures are often impregnated with cinnabar, but rarely to a sufficient extent to pay for mining.

During the driving of the adit, some of the limestone passed through was found to be much altered, being black in colour, containing bituminous matter and traces of quicksilver.

The ores of this mine are generally low grade, but it is reported that a large supply is available, and two furnaces of the muffle type (as designed by the author for the Guadalcazar Mine) are now at work here, giving good results, and returning a fair profit to the company.

Following the line still further, a number of small Mexican workings, dignified by the name of mines, and all with high-sounding titles, extend for probably two miles, the track passing over a series of rounded knolls, over which in many places gypsum-bearing mineral springs have deposited a thick crust.

Crossing a deep cañon, which shows indications of tremendous floods at one time or another, the mountains are found to trend to the west, enclosing here the large plain of San Juan Dilla. The river, which flows through the cañon irregularly, after flowing in a circuitous direction in this plain, disappears in the sand, or, in the case of heavy floods, flows into a cavern which has not yet been fully explored. It has been followed for some 100 yards, and the noise of underground water was distinctly heard. No doubt owing to this outlet water is entirely absent from the mines in this range of mountains, even the drinking water having to be brought for a distance of several miles.

In these mountains many workings have been opened up in former times, and that these have been very extensive can easily be seen, not only from the amount of refuse ore which has passed the furnaces, but also from the fact that the workings have caved in in several places; in one case the result has been an enormous hollow, 50 or 60 yards in diameter, and of considerable depth.

The upper crust of rock seems to have been hard and in layers, being chiefly gypsum, but the main body of the ground has evidently been much broken up, and contains large bodies of the friable and gravel-like class of rock, locally called "almendrilla," in which small fragments, somewhat of the size of a nut, loosely held together by a mixture of gypsum and calcite, or of a more or less stannite clay, has proved to be of too difficult a character for the old miners, it having a tendency to run almost like quicksand, and, in the absence of proper timber, it is impossible to drive through it without the greatest danger.

In the hill of the Trinidad itself are found the richest known deposits of this district, and it is this group of mines which are credited with having received the Government premium of \$25,000 in 1843. In 1890 they were acquired by an English company, under the name of The Guadalcazar Quicksilver Mines (Limited).

The author, who held the position of consulting engineer to the company until the end of 1894, inspected the property, and reported on it in 1890. The following, extracted from notes taken at that time, may very usefully be compared with the results of later information obtained during two other visits to the property extending over several months, and the results of the working up to the end of 1894, as taken from the regular report of the resident engineer:

"The area acquired is shown on the Plan No. 3, and included some 2,500,000 square metres, and extended somewhat in the form of the letter 'L,' the longer limb pointing towards the south-east, and extending for a distance of considerably over 2 miles. The ground covered by the property is very hilly, the summits being rounded and mostly capped with flows of mineral spring deposits, chiefly gypsum. The outline of the property is such as to include practically all the known ore-bearing ground over the full length of the concession. The result of the author's inspection satisfied him that the property was a very valuable one, and had been well prospected by the old Mexican miners, who had located a large number of mines, and proved the deposits by very considerable and extensive workings. The extent of the ore-bearing ground and the actual deposits already proved was, in his opinion, much more than could be properly worked under a single manager, there being ample scope for the company's operations in the two mine groups of La Trinidad and San Antonio alone.

"It is the habit in Mexico to give a name to each opening or working as if it were a separate mine, and the number of so-called mines upon the property was very great, the names of some of the principal being:

"San José, Sangre de Cristo No. 1, Animas, San Augustine.

Trinidad Group.—Tunel del Desierto, Jesús, Gundalope, Solidad, San Juan 'Boca,' San Juan 'Barreno,' Dulces Nombres, Dolores, San Antonio de Padua, Sangre de Cristo No. 2, San Andrés, San Antonio de Guyabito, San Francisco, El Muerto, San Miguel, El Refugio, San Nicholas.

"The deposits of mercurial ore here are clearly the result of volcanic agency, and the action of hot springs or geysers, the general deposit from which has been gypsum. This, in most places, has been deposited from solution in the form of thin layers over the country rock. In this gypsum are found sulphides of mercury in veins or pockets, deposited chiefly where there have been veins or hollows; and the mass of rock thus formed has been broken up and twisted by volcanic action, so that the formation is of an extremely irregular character. In some cases the ground has been so broken up as to be difficult to mine, owing to its consisting of small fragments of gravel, scarcely held together by clay-like material, with infiltrations of gypsum and lime deposit. Much of the clay-like matter is stannite, and this class of ground, known as "almendrilla," crumbles and falls in the working, running in some cases almost like quicksand; from this cause large caves have taken place in several of the workings. The geyser-like form of deposit is found throughout the property, in most cases on the top of the ridges, the rounded summit of which is evidently due to the gradual growth of rock by the deposit thrown out of the geysers, which has gradually covered the country rock, forming extensive mounds and elevations.

"In the company's mine of San Antonio de Padua, and the

connected workings, there are several of these geyser-like formations or chimneys, and large chambers excavated by the older workmen attest the quantity of mineral which has been extracted by them, and of which small quantities still remain on the walls showing rich ore. At several points in the mine indications of the same character of deposits appear, and these indications should be followed up, as it is very probable they will lead to discoveries of bodies of the rich soft black ore, which seem to be characteristic of the quicksilver-bearing deposits of these mines.

"Entering the San Antonio de Padua Mine, of which the plan No. 3 B shows the workings as far as cleared out, we find what may be called a main ore deposit, and here a number of what appear to have been geyser vents have been worked on, and the ore extracted. The great extent of the ore bodies which have been worked on by the previous owners is shown by large caverns or chambers, which still exhibit on their sides the character of the soft, black ore which they contained. Numerous small veins of black ore can be traced here in various places; and in the new galleries driven by Mr. Mackenzie, a well-marked vein of black ore, 20 inches thick, is visible, running apparently 10° north of east. Black ore is also visible in the walls of the gallery. At crosscut No. 2 west another vein of black ore, lying almost flat but with a slight dip to the west, is to be seen, and at the entrance to the crosscut a mass of black ore, probably a chimney, has been cut through, showing a width of 3½ feet in the roof. This block of ground is very promising, and, in all likelihood, may develop into a large body of ore.

(To be continued.)

MEETINGS OF MINING COMPANIES.

GIBRALTAR CONSOLIDATED GOLD MINES, LIMITED.

THE first ordinary general meeting of the Gibraltar Consolidated Gold Mines (Limited) was held on Tuesday, at the Cannon-street Hotel, under the presidency of Mr. A. HOFFMANN (the Chairman of the company).

The SECRETARY (Mr. W. F. Garlaad) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—You have heard the circular read, and you are aware that this is what is termed in legal phraseology, our statutory meeting. The law, which does not itself enjoy an irreproachable character for promptness and expedition, yet seems to demand the exercise of those valuable qualities from those for whom its enactments are framed. It requires that within four months from the date of the registration of a company its shareholders shall be assembled—it does not specifically say what they are to do, but it is doubtless intended that they shall gather from the directors some information as to the position and progress of the enterprise in which they are mutually interested. This seems to me a wise and useful provision with which we have no fault to find, except in the case of an enterprise like ours in its initial stage, and situated at so great a distance. Four months is too short a time to enable us to speak of any definite results, or even of extensive progress towards that fascinating goal, towards which all shareholders look with absorbing interest. Yet we, your directors, are most glad to meet you, because if we have nothing very definite to communicate, still what we have to say will, I am sure, be nothing but that which will be pleasant for you to hear. I should like to say at once on the very threshold of the remarks which I shall have the honour to address to you, that I am most anxious to guard myself against the language of exaggeration. Speaking for myself and my co-directors, having a due sense of our responsibility, nothing would be more repugnant to our feelings as sober business men, but even if we were inclined to yield to such a temptation, or if we were less sensitive on the point, there would be happily no need, for we believe that the plain, unvarnished truth will be found attractive enough to satisfy the most sanguine of us. We have good reason to think that we have a property which will amply fulfil the promise held out to us by our able consulting engineer, Mr. Eissler, who, after a patient protracted and painstaking inspection—a most thorough and exhaustive examination—has staked his considerable reputation on the assurance that we possess a property which will, in all reasonable probability, take its place in the very forefront of gold mines in Australia, and which, when in effective operation, will yield at least 3000 ounces of gold per month. These figures are not mine; they are Mr. Eissler's, and knowing him as we do, and appreciating his conservatism, we have no reason to doubt their accuracy; on the contrary, we hope and believe they will be exceeded; for, as I shall presently have occasion to show you, there are sound reasons for this more sanguine anticipation, not only because further development has, so far, confirmed Mr. Eissler's original report, but because we have obtained an important extension of our territory—a fact to which I shall presently allude—which, we believe, will enhance its value and productiveness. I have said—and your intelligent minds will easily have grasped the fact—that four months is too short a space of time in dealing with an enterprise like ours to say very much as to progress. We determined from the beginning that our undertaking should be commenced and carried on in such a way as to ensure its permanence, and secure the fullest measure of development; and you know when you determine to raise a superstructure which shall be permanent and lasting you must commence by putting in an adequate foundation, or your edifice is likely to come to grief. We have the best reasons for believing that we have a valuable property, and commencing as we did with a cash working capital of £50,000, we saw no reason for stinting the means—properly applied and conservatively directed by our managers—calculated to ensure a high degree of permanent prosperity. Our company was registered on September 21, just four months ago, and the fact was at once cabled to our local board in Sydney, who were requested to obtain a prompt transfer of the property to this company. This was confirmed by our solicitor to their agents in Sydney, from whom a cable was received on November 6, to the effect that the transfer had been practically completed, and we were then free to commence operations. A sum of £5000 on account was then remitted to our local board by cable order, with instructions to commence and proceed at once with the active development of the property, and you will have had an opportunity of learning from the periodical reports which we have received from our consulting engineer and from our mine manager, the amount and nature of the progress which has been made up to the latest date from Australia. This has necessarily been somewhat slow, because a quantity of machinery—such as air compressor, drill, and other modern and improved appliances for expeditions and effective working—had to be ordered and sent from this side; but no time has been lost in this direction. Our excellent and experienced London managers, Messrs. John Taylor and Sons, who had already been in communication on the subject with Mr. Eissler were at once authorised, and ordered everything immediately requisite, including a 25 stamp battery, and turbine wheel for generating power, both for mining and milling purposes, for which we are assured there is an ample supply of water on our property. I am glad to inform you that the greatest expedition has been employed in forwarding this important work. A portion of the machinery is now ready for shipment, and the remainder will follow shortly. No time will meanwhile have been lost, as a considerable amount of deadwork, such as deepening and widening main shafts, the extension of drives and crosscuts, and other necessary development work, is actively progressing, and we anticipate that by the time the battery has reached its destination, and has been placed in position, a large body of ore will have been raised and ready for treatment, and profitable

work commenced on the iron and tin veins and the gold and silver veins.

results may then be expected continuously to follow. Naturally, you will ask when this desirable period will be reached. On this point I can only refer you to Mr. Eissler's report, which has already been before you. He there states that within 12 months he anticipates that the mine will be sufficiently opened up to ensure a steady output of 1000 tons of ore per month. He calculates that for a considerable time to come the company can rely on raising ore of high-class quality, and as his most conservative estimate of the average yield of gold from this ore is 3 ounces per ton, you can easily calculate the result. It means, if his anticipations are realised, a net profit, after paying mining and milling expenses, of about £9000 per month, or equal to about 35 per cent. per annum on the capital of the company. Now, it is important and interesting to examine for a moment this estimate of the quality and value of the ore in our property, because on this vital point our prospects naturally depend. We have it, on Mr. Eissler's authority, strongly backed up and confirmed by the previous owners of the property, that the average yield of gold has been about 4½ ounces per ton. On this subject it is useful to hear what Mr. Eissler himself says, as the result of his careful and exhaustive examination. He states (I am giving condensed extracts from his report):—"1596 tons of ore taken from the Radcliffe's and Perkins' shafts have yielded 5969 ounces 10 dwts. 21 grains, being an average of 3 ounces 14 dwts. 19 grains of gold (without reckoning the tailings, which were estimated to yield, in addition, 13 dwts. 1½ grains of gold per ton), thus averaging 4 ounces 7 dwts. 10½ grains per ton." To corroborate the above, and to prove the value of the ore in sight, which he estimated at about £100,000, 12 bulk samples were taken from all parts of the lode in the Radcliffe's levels and shafts, and eight bulk samples were taken from the Perkins' shaft. The total average assay result of these 20 bulk samples from all parts of the mine was 4 ounces 11 dwts. 12 grains per ton. Mr. Eissler goes on to say that he blasted out of the lode in both shafts 102 bags of ore, weighing 3 tons 1 cwt. 20 lbs., which he personally treated at Park and Lacey's works at Sydney, and which gave the average assay value of 4 ounces 10 dwts. of gold per ton. Not content with these apparently conclusive tests, Mr. Eissler determined upon another trial on a more extensive scale, and got out 154 tons of ore, which were crushed, and the result was cabled and published shortly after the formation of our company as having yielded 4½ ounces of gold per ton. But this dispatch appears to have been premature, for when the tailings were subsequently treated they gave the remarkable result of 1 ounce 2 dwts. of gold per ton, which brought the average of this crushing of 154 tons up to about 5 ounces per ton. We can hardly expect that this property will continue uniformly to give us such extraordinary returns. We shall be fortunate, indeed, if we obtain an average of 3 ounces per ton. The results of these trials, however, are most satisfactory, for each successive crushing singularly corroborates its predecessor, and all bear out the favourable opinion and report which Mr. Eissler has made of our property. I have only one or two more observations to make on this branch of the subject. When we speak of 3 ounces of gold per ton we must have due regard to the character of the property, its extent, and the conditions which surround it. I am very far from desiring to draw fawning comparisons. I earnestly hope that every investor in gold mining property in Australia and elsewhere will reap a handsome reward for his enterprise. Prosperity is contagious. I am deeply interested in the advancement and progress of Australia, and the multiplication of successful gold mining properties in the colonies means a high tide of prosperity. But it is undeniable that 3 ounces per ton in one place means much more than a similar, or even a far greater, yield in another, if less favourably situated. In this respect we have hardly anything left to be desired. Our property is well situated on an eminence above sea level, in a salubrious climate, where operations can be carried on throughout the year without interruption. We have an abundant and never-failing supply of water for all purposes. The district is well settled, and is only 16 hours distant from Sydney by the Government railway, from the terminus of which the mine is reached by a good macadamised road. Labour is plentiful and moderate in price, and timber and fuel are available at reasonable cost. When we add to this the undoubted fact that the district is proclaimed gold field of proved extent and richness, from which, at the lowest estimate, £400,000 worth of gold has already been won, principally from surface workings, and that scarcely any serious attempt has yet been made to utilise the reefs which are known to exist, and have been proved at depth, we may, without exaggeration, believe in Mr. Eissler's prediction that if the promising evidences of its extent and richness are but moderately borne out, we have one of the most valuable gold mining properties yet discovered in Australia, if not in any part of the world. Now, you will probably ask—and quite naturally, as we place so much reliance in the investigations and reports of Mr. Eissler—what warrant we have for our confidence. My answer is this: Mr. Eissler is a mining engineer of great experience, and of well-known and proved integrity. His works on mining and metallurgy have become standard books of reference throughout the mining world. His high character and professional attainments are well known to some of our largest shareholders—in fact, those who know most about Mr. Eissler are amongst the largest holders of our shares, and would probably not have been interested in our company at all but for their confidence in his probity and ability. Beyond this we have obtained reliable corroborative evidence on the spot from various sources, and we have the testimony of the Chief Government Inspector of Mines, himself a high authority on the subject, who in his report to the Minister of Mines in August, 1894, directed special attention to the rich character of the Gibraltar Mine, its successful development, and promising prospect. And finally Mr. Eissler was accompanied to Australia on behalf of the vendor company, in which he himself held a substantial interest (the Anglo-Australian Exploration), by a gentleman of great experience and ability. I refer to my friend, Mr. David Marks, who has been connected with highly prosperous commercial affairs in the colony for many years, whose interest and business it was to satisfy himself, and personally to investigate to the extent of his experience, which is not small, all that was put before him with respect to this and other gold mining properties. Mr. Marks, I am glad to say, has the greatest confidence in Mr. Eissler—confidence inspired by long personal contact and acquaintance, and the observation of an intelligent mind and a singularly acute judgment. I think, therefore, you will agree with me that all these facts taken together should inspire us with equal confidence in our property, and in the very satisfactory reports and anticipations we have before us. Now, perhaps, on the principle of the gourmand, who reserves the choicest morsel to the last as a *bon bouche*, designed to leave a pleasant impression of the feast at which he has assisted, I will conclude by giving you the details of a transaction which will, we hope, not only add substantially to our future profits, but will, we believe, extend the life of our property, and its value as a gold producer. You will, doubtless, have seen in the Press an announcement which was published soon after the formation of our company that our property, which originally consisted of 82 acres, had been increased to 216 acres. It affords me unqualified pleasure to state that this considerable extension of our property has been effected without any increased cost to us. You will observe from the plan which is before you that the various sections and leases of which our original 82 acres was composed, includes one of 22 acres 3 rods 15 perches, which formed part of what is known as Shepard's alluvial lease of 156 acres. The vendor company (the Anglo-Australian Exploration) had originally secured the whole of this area of Shepard's, together with the valuable water rights and races in conjunction therewith, but had only agreed to sell us that portion on the south-west side into which the reefs were known to extend, together with the full right and the use of the water and races until the same left our boundary on the north. But after the formation of our company, when our negotiations had been quite concluded, letters were received from Mr. Eissler, in which he expressed his unqualified opinion that the whole of Shepard's alluvial area should be amalgamated with our quartz mining area, particularly because it would absolutely ensure to us a perfect, complete, and undisturbed control over the whole of the water even after it had left our boundary. Naturally

the Anglo-Australian Exploration Company placed a considerable value on these remaining 133 acres, in view of the fact that mining operations were being vigorously carried on by the original owner of the property, who had, with considerable difficulty, been induced to part with his interest, it being a well-known fact in the colony that Mr. Shepard had amassed a considerable fortune during the time he had successfully worked portions of this property. You are aware that our company was formed for the purpose of quartz mining, and as our engineer considered the water rights of great value for power purposes—which, as you know, is an important factor for economical working—the Anglo-Australian Exploration Company doubtless felt themselves bound to give us complete possession of those rights, without the most remote possibility of disturbance, and so generously handed over to us this additional area unconditionally and free of cost. I think there are few instances on record wherein a gold mining company, starting with so considerable an area as 82 acres, finds its holding more than doubled by a voluntary act of this kind on the part of the vendors, and I am sure you will agree with me that our warmest thanks are due to the Anglo-Australian Exploration Company for their liberality, which has been prompted, no doubt, by a generous consideration for their first-born enterprise, and their natural desire to extend and ensure its prosperity. (Applause.) I believe it is customary to wind up a speech with a peroration, but I have generally noticed that perorations are indulged in with the object of inspiring hope and stimulating courage, but I do not think you require any rhetorical stimulant. I prefer to wait until I have next the pleasure to address you, when I hope the most attractive and acceptable peroration will be the announcement of a thumping dividend. I will now ask Mr. Frank Taylor to address you concerning some points of technical detail connected with our property, and the reports which we have received up to date, with which he is much more familiar and better able to deal than myself. I have only to express to you my warmest thanks for the patience and indulgence with which you have listened, and my appreciation of the zealous co-operation of my brother co-directors, our capable managers, Messrs. John Taylor and Sons, our able secretary, and especially of our local board in Sydney, composed as it is of eminent public and experienced business men; of our consulting engineer, Mr. Eissler, of our experienced mine manager, Mr. O'Brien, all of whom have worked in zealous co-operation, which affords the best augury for our future prosperity. (Applause.) I do not think my duty would be complete without reference to the severe loss we have sustained by the lamented death of our highly-esteemed colleague and director of this company—the late Mr. Henry Seebom. Unhappily, we had but a limited opportunity of learning his great worth, but such as we enjoyed convinced us that his great reputation both as an ornament to commerce and science was richly deserved, and we sincerely lament his loss. (Applause.)

Mr. FRANK TAYLOR said: Gentlemen—The Chairman has dealt so very exhaustively with your property that very little is left for me to say. I will, however, give you a few particulars concerning the mine itself. A statutory meeting must be held so very soon after the operations on the mine have been commenced, and after the original reports were made, that there is not very much time for any underground work to have been done. In some instances we find that the early work at the surface really monopolises the whole of that time, but in this instance at Gibraltar we have been more fortunate. Immediately the company was formed, and the capital was subscribed, information, as the Chairman has told you, was sent to the other side, and work was commenced on October 1, and I think from October 1 to the date of the last advices received I shall be able to show you that a very considerable amount of work was done towards starting the full development of your property. The ore-bearing portion of the Gibraltar property is about 3000 feet long by 600 feet wide, and that is now being attacked by four shafts—the Radcliffe's, O'Brien's, Perkins' and Shepard's. The most important of these is Radcliffe's, where a considerable amount of work has been done. It is the most northerly shaft; and is within 380 feet of the north-east boundary of the property, and stands at the same time higher up the hill than any of the other shafts. The ground slopes from Radcliffe's shaft down to Shepard's, which is situated close to the creek which bounds the property to the south-west. You will gather from what I have said that the workings in this Radcliffe's shaft are higher than the other workings on the property, and that levels which may be driven in future from the north—from Perkins'—and the south shafts will come in at a lower depth than our present workings, which, for many reasons, is advantageous to us. At the date of Mr. Eissler's report and also on October 1, which was the time at which we commenced operations, this Radcliffe's shaft was 250 feet deep. On December 14, which was the date of the last advices we received, that shaft was down 304 feet, so you see in that short time they had deepened the shaft by 54 feet. That has been sunk on a very good lode. When Mr. Eissler was recently there he took 500 feet from surface a sample which assayed 5 ounces of gold to the ton of ore, and we have since heard by later letters that there is still rich ore in the bottom of the shaft. That being the deepest point of your property, I am sure this must be very satisfactory to you. The shaft has been vigorously pushed down as best they could with hand labour, but work will be more rapidly proceeded with as soon as we get rock drills to work. It is proposed, after they get to a depth of 350 feet, to drive other levels, and when those are started the shaft will be pushed down further. At a depth of 230 feet from the surface levels have been driven both north and south—106 feet north and 120 feet south, and since this company commenced to work, these levels have been driven 85 feet. The south level has been driven in rich ore nearly the whole way from the shaft, and the ore body has averaged 20 inches in width, opening out in places to 2½ and 3 feet, and on December 1 Mr. Eissler writes that in the south drive at the 230 feet level the reef averages 2 feet of splendid ore. At that time he took a sample which assayed 5 ounces 12 dwts., and on December 14 the report says there is still rich ore in the end. The north level was driven through good ore for a distance, and then a dyke was encountered, and they seem to be under the impression that the reef is now to the east. With that in view they are driving a crosscut, hoping to find the reef in that direction. It has gone out 38 feet through mineralised rock and patches of quartz, but as yet no reef has been discovered. We hope, however, to hear of good ore being found in this direction. There is evidence of fair stone, and Mr. O'Brien, your manager, predicts an improvement at that point, and as regards this mine there is no greater authority than he to predict upon such a point. At 160 feet from the surface levels have also been driven north and south, 258 feet to the north, and 116 feet to the south. The north level, which is going towards our boundary, went through good ore for 224 feet, and the last 30 feet driven has been through broken ground. In the end there are small leaders, but nothing of much value. However, it is hoped that another shoot of ore might be found in this drivage before the boundary is reached. This company have driven 34 feet in length in these levels. The south level has not been extended at all by this company, but a crosscut to the west through congenital ground has been driven 27 feet, with the view of cutting the reefs in depth, which are known to exist by workings visible on the surface. There is also a hope here of finding something by the light of a recent discovery at the surface, which I will mention later on. The manager states that there is still some first-class ore to be taken away above this level, which is 160 feet from the surface. The total development carried out in the mine from October 1 to December 14, both by sinking and driving, was 21½ feet, which I think you will say may be considered as quite satisfactory in the initial stages of this company's operations. Mr. Eissler tells us that the development now on the reef prove rich ore 350 feet in length and some 300 feet in depth. The lowest level driven south is still rich, and the bottom of the shaft is rich, and he sees no reason why this should not continue. We think the shareholders will consider this a very good and satisfactory statement as regards this most important working on the property, and at the deepest point. The shaft south from Radcliffe's shaft—the next we come to—is called O'Brien's. It lies rather to the east of what is

presumably the run of the reef, and has been sunk 130 feet. It is now full of water, so Mr. Eissler was not able to report anything definite as to this. It was, however, said to be on a good reef. A small hoisting engine is now erected, and we hope by the next advices to hear that the water is out, and that sinking and driving have been continued with satisfactory results. This, I think, may eventually become the main shaft of the property, and my impression is that it will strike the main reef on the underlie, and the main shoots which are expected to dip south. These will eventually be more economically worked from this shaft in the deeper level than from the present Radcliffe's shaft. The next shaft is called Perkins'. It is 1000 feet to the south of Radcliffe's, and has been sunk 180 feet. No work has been done in this shaft since the company took possession of the property, but an engine has been put up, the water has been baled out, and work is now in progress. It is proposed to sink down and drive levels north and south. Mr. Eissler tells us that out of this shaft came 9000 ounces of gold. At the 170 feet level crosscuts have been started by the late workers to cut two reefs—one the Chinaman, and the other Stewart's—and these crosscuts will be immediately continued now the water is drained out. Stewart's, we believe, was a very good reef, and the Chinaman is also a particularly good one. Shepard's shaft is the remaining one, and has been sunk 80 feet. It was started close down to the creek at the extreme south-west end of the property, and when it is got down 180 feet it is proposed to crosscut to the east to intersect a lode which was worked upon by a small shaft sunk 40 feet deep, practically in the bed of the creek. This small shaft, during the recent flood, was entirely destroyed and filled up with rock. The intention there is to cut the reef at a deeper level from Shepard's shaft, which is higher up the bank and in a safer position. If the statements as to the richness of the rock worked upon in this old shaft are correct, we may be able to return very good ore from this working. There are other reefs on the property, as you will gather by reading Mr. Eissler's report, which will be attacked as opportunity arises, and we must hope that the result will be that the anticipations formed with regard to them will be realised. There is an instance of the possibilities in this direction contained in a statement in the manager's letter received yesterday, wherein he tells us that in squaring out a paddock for storing quartz on the surface at Radcliffe's shaft, they have cut a nice gold-bearing reef, about 5 or 6 inches thick, and he thinks it is a continuation of the reef known as the Golden Bar. The Chairman has already referred to the machinery, so I won't say very much about that. The machinery has been dealt with in a very prompt way. As soon as they were aware that work was to be proceeded with on the other side, they procured some portable hoisting engines, which enabled them to get on with the work. Other large winding engines have been ordered on this side, and will be forwarded when required. Rock drilling machinery is being shipped, and no effort will be spared to get it erected as quickly as possible, and when it is driving will be more speedily and economically carried on. A 25 stamp mill is also ordered. I would like to say one word about the water power, which is a very important matter. The stamp mill and the compressor for driving the rock drill will be driven by water power, and Mr. Eissler reports that there is ample for these purposes. In his last letter he states:—"I have travelled during the last two weeks over a large portion of this colony both west and south, and the general verdict of the agriculturists and miners is that this has been the driest season for the last 20 years. The crops are a failure, and wheat is being sent over here from California. Shepard has his two races fall, and I judge that there are 400 or 500 inches still running in Adelong Creek. This is precisely what I wanted to know." That tells us that even in the dry season we have ample water power for our own purposes. We seem to be very fortunate, indeed, in connection with this mine. We have excellent water power for driving machines, and we have very little water in the mine, so that at present it does not look as if we were going to have heavy expenses in providing the necessary pumping machinery for clearing out the water. We have had some talk about sending out electrical appliances for transmitting power for various purposes at the mines—for lighting among other things—but we have decided to defer that matter until the manager has got his other machinery fully at work. Mr. Eissler closes his last letter with these words:—"So far I have reason to be satisfied with the mine, and expect to see the anticipations I expressed in my report fully realised." The latest news from the mine is in a cable dated December 23, which says:—"Mine looks exceedingly well." I think, in conclusion, I may say that we must give Mr. Eissler and Mr. O'Brien, our manager, of whom we have received excellent accounts, credit for having done well in the short time they have had to operate since the company was formed, and with all the conditions so favourable to bringing this enterprise to a successful issue, I feel that we are justified in looking forward most hopefully to the results being obtained that Mr. Eissler has led us to expect in his original report." (Cheers.)

On the motion of Mr. LLOYD, seconded by Mr. HIGGINS, a cordial vote of thanks was given to the Chairman and directors, and a brief acknowledgment of the compliment, given by the CHAIRMAN, terminated the proceedings.

THE VICTOR-WAIHOU GOLD MINING COMPANY, LIMITED.

An extraordinary general meeting of shareholders in the Victor-Waihou Gold Mining Company (Limited) was held on Tuesday, at Winchester House, for the purpose of passing resolutions amending the Articles of Association, in a manner rendered necessary by a recent Act of the Legislature of New Zealand.—Mr. HENRY WILSON (Chairman of the company) presided.

The SECRETARY (Mr. E. W. Felgate) read the notice convening the meeting.

The CHAIRMAN called upon the secretary to read the resolutions proposed for the acceptance of the meeting.

The SECRETARY having complied,

The CHAIRMAN said: Gentlemen—You have heard the various resolutions read, and I can hardly expect, however close you may have attended, that you will readily understand them all. It may, therefore, be convenient if I briefly explain to you the purport and scope of the proposed amendment in the Articles of Association, which is simply that we conform to the colonial law, which I presume by this time has received Imperial sanction through the medium of the Governor of the Province, and been enrolled upon the statute book. It would seem that the object of the new law is merely to facilitate the local dealings in the shares by those who hold them in the colony, and it has been rendered incumbent upon all companies who have their domiciles anywhere outside the colony to open a colonial register. We have taken all the necessary steps to comply with those regulations, and as soon as possible we shall have the colonial register completed. Special facilities will be given to those residing in the colonies, and who hold shares there, to have them transferred from the London register to the local registrar, and vice versa. I do not think that any difficulty can possibly arise, nor can any intention be contemplated by the Government of interfering with the rights or privileges of those who are already on the English register as shareholders. The Chairman concluded by moving the adoption of the resolutions.

Mr. SMEDLEY seconded the motion, which was carried unanimously.

Mr. JAY moved a hearty vote of thanks to the Chairman and directors, which was carried by acclamation, and the proceedings terminated.

Mr. ALFRED CAILLAT has been appointed secretary of the Weld-Hercules Gold Mines (Limited), as from February 1 next, and on and after that date the offices of the company will be at Broad-street House, Old Broad-street, E.C.

HANNAN'S EXCELSIOR GOLD MINES, LIMITED.

The first (statutory) general meeting of shareholders in the Hannan's Excelsior Gold Mines (Limited) was held on Wednesday, at Winchester House, Alderman A. J. HAWKES presiding.

The SECRETARY (Mr. E. W. Appleton) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—We are called together to-day, as you will have noticed from the circular which has been read by the secretary, so as to meet the requirements of the law, which compels us to have our statutory meeting within four months of the registration of the company. Of course you know that in so short a time as that it is impossible to largely develop a gold mine, but I am pleased to tell you that we have not been idle during that time. On October 4 we went to allotment, and on the 16th of the same month we had health property transferred to us, so you see there was not very much waste of time there. We cabled out the money to Western Australia, and the transfer was then made; in fact, the property was in the possession of the company before we had paid the vendors the whole of the balance due to them, which showed that they had faith in the directors to trust them to that extent. At the present time the deeds are in the possession of our solicitor, and everything so far is complete. Within a few days of that time we also appointed a most experienced manager, a gentleman well known in this district of Western Australia—in fact, he is interested to some extent in the Crossus Mine—I refer to Mr. Thomas Eyre. He has from time to time sent us cablegrams saying how satisfied he is with the prospects. In one of his reports dated December 3, he stated that a very extraordinarily rich lode had been struck on the Crossus No. 1 North Company's lease, and that there is very little doubt this lode runs diagonally right through this company's property. We believe that the situation of this property is one of the best in Western Australia, because it immediately adjoins the Crossus Mine. It is in the vicinity of such rich mines as the Maritana, Hannan's True Blue, the Reward, and the Brownhill, and also the Great Boulder, and others which are proving themselves to be of very great value—(applause) in fact, I believe that all these mines are quoted on the Stock Exchange to-day at a very good premium, and we trust that in a very short time we shall also see our shares quoted at a premium as great as theirs. There is no doubt that the mines in Western Australia will prove themselves, as time goes on, to be the richest in the world, and we believe we are amongst them. In addition to that, I feel that the security of investors in Western Australia is very far better than in South Africa, having regard to the late crisis and what has already gone on in the latter place. It is our intention to push forward as fast as possible the working of this mine, and so soon as we are advised on the matter we shall send out some of the finest machinery that can possibly be obtained to work it. We are, fortunately, in the position that our capital is secure. We have, in fact, some thousands of pounds already on deposit at our bankers, although all the calls have not been paid, so you will see the position of the company is a very good one. If you consider the dates which I have given you—namely, that on October 4 we went to allotment, that on the 16th we completed the purchase, and that we were at work at the mine within a very few days, I think you will admit that we have not left things undone. We shall from time to time inform you of the position of things at the mine, both by circular and through the Press, and I think that when we next meet we shall be able to show you such a report and balance-sheet and, I trust, a large dividend that everything will be satisfactory to you, and that none of you gentlemen who have invested your money in this Excelsior Gold Mine will ever regret have done so. Mr. Kitto, our consulting engineer, will presently explain to you what he thinks of the reports that have been received from our manager, and will no doubt give you his ideas as to what we may expect from the mine, and so far as regards any remarks that any gentleman would like to make who may know something of the district, I shall be very pleased to hear them, as well as to answer any questions I possibly can if proprietors desire to ask them. I do not know that I have any further statement to make now. At a statutory meeting there is not much that one can say—there is no opportunity of knowing very much about the property; but I think you will admit that there has not been any delay up to the present. We have got a good mine at work at the present moment, and from this meeting we shall push forward as fast as possible, and do all we can for the benefit of the company. (Applause.)

Mr. T. C. KITTO, having asked for the indulgence of the meeting since he was labouring under an indisposition, proceeded: When I was first asked to become the consulting engineer of your company I did everything in my power to satisfy myself as to the bona fides of the concern. I found that the property had been examined and reported on by Mr. Hawke, who is a practical mining engineer, and also by Mr. Blevins. Both these gentlemen were perfectly agreed in their statements with regard to the lodes which had been developed by exploration works on your property, and they particularly emphasised the fact that the Crossus lode, which is known as the Green lode, and is rich in gold wherever opened upon, passes through your property from one end to the other. This view seems to have been borne out in various ways, and one point which I think very significant is, that when this company first negotiated for the purchase of the property, it stood at the extreme east of the Kalgoorlie run of reefs. Now, not only have claims been pegged out around it, but your property practically forms the very centre of this very great run of gold reefs. From a careful inspection of the plans of the district, and judging by the surrounding circumstances, I could arrive at no other conclusion than that a very rich series of gold reefs crossed your property. This was endorsed, not only by the expert who originally reported on the property, but also by men of considerable importance in the mining world, and who were thoroughly acquainted with the district. I was, therefore, perfectly satisfied of the genuineness of this property, and I will now just make one or two remarks with regard to our experience since we have obtained possession. As our Chairman has already informed you—and I am quite sure you will all agree that very great credit is due to our Chairman and his colleagues for the very expeditious manner in which this property has been transferred and work started—I was very fortunate in securing the services of a very able manager, one who is thoroughly acquainted with all the conditions under which gold mining in this particular part of the world should be carried on. The conditions under which gold is found and gold mines conducted in one part of the world and another are so vastly different that I feel perfectly certain that a very large number of the rich Australian gold properties that have not paid dividends as yet would be paying dividends to-day had they been entrusted to the care of men who had a thorough knowledge of the locality in which the mines were situated. (Hear, hear.) To my knowledge, men who have had a fair amount of experience in some parts of the world have been sent out there, and they have had to gain new experience at the expense of the companies they were representing. We, I am pleased to say, are very fortunate in securing the services of Captain Eyre. He has had a great many years' experience in Western Australia, and the cables which from time to time he has sent us I am bound to say are very satisfactory, as far as the prospects of the mine are concerned. Of course, you are aware that we have only been in possession a very short time indeed, and I may say I am very proud to be associated with a company which has an ample working capital, and which has pushed on its works so satisfactorily and at such a rapid rate, and one that is in a position to place before you such a satisfactory statement as we are able to do to-day. (Applause.) With regard to this large lode which has been discovered in the Crossus North Company's property, of course your Chairman has simply referred to it as being an ordinary lode, but it is 30 feet broad with fair grade ore throughout, and some of it very rich. Now, our manager has been down in the mine, and has taken the dip of that lode and its longitudinal bearing, and in a letter written on December 3 last he distinctly states that that lode crosses our property diagonally. I may say for the benefit of those among you who may be unaware of the fact that

such a lode as this—running the entire length of your property—even to myself, who have inspected most of the very richest mines in every country in the world, is a discovery positively phenomenal. Our manager at the present time has driven a crosscut with a view of striking this lode. He may not strike the lode as soon as he anticipates, but, on the other hand, it is quite possible that we may receive a cable any week saying that he has struck it, and the instant that he strikes it I do not hesitate to say that your shares will be worth—well, I rather hesitate to say what they will be worth, but £5 or £6 would certainly be cheap for them. (Applause.) Nothing shall be wanting on my part, or on that of your directors, to bring the affairs of this company to a successful issue. (Applause.)

Mr. BONNARD said: We have listened to a very able statement from our Chairman to-day, and an equally able statement from Mr. Kitto. I do not know whether they have been elevated by the success, or the probable success, that this company is likely to achieve by reason of this lode passing through it, but I fear that they have not made the statement we expected them to make with regard to what have been the developments of the mine, and the prospects of the mine, as set out in the prospectus. (Hear, hear.) When the prospectus was issued, we knew nothing about the lode which was passing from the Crossus into our own property. Of course, if this Crossus lode does pass into our property, we have every reason to be satisfied. What, however, we should like to hear from the Chairman, or Mr. Kitto, is whether the development of the mine since it has been in the possession of the company demonstrated, as far as possible, the statements in the prospectus. I do not say that any information in this respect has been withheld, but we applied for our shares upon the statement that certain developments had been effected, and that the reefs were likely to exist. It would, therefore, be a satisfaction to us if we could have from the Chairman a statement of the developments which have taken place.

Mr. KITTO said: With regard to the statements in the prospectus, of course they were based on the reports of Mr. Hawke and Mr. Blevins, and we have no reason whatever, as far as I can see, to doubt a single statement that Mr. Hawke and Mr. Blevins made. You will remember that in the prospectus a great point was made of what I referred to just now—namely, the Green lode. This lode is there now, and is very much the same as we reported when the prospectus was issued. When Captain Eyre took possession of the property, he had such a thorough knowledge of all the lodes in the neighbourhood that when he went down and saw the green lode on our property, he thought in all probability it was not the main lode, on account of its size, and he arrived at the conclusion that it might possibly be a leader or offshoot from the main lode, and instead of carrying on the development, and sinking and driving on that lode, he, in my opinion, very properly drove crosscuts on each side for the purpose of ascertaining whether the large lode, as seen in the adjoining property, was not standing either to the right or the left.

Mr. FELTON: Is the Green lode the same that was pointed out

just now as touching our property in a diagonal direction, or are they two distinct lodes? We were told in the prospectus that in addition to this said Green lode, that "one cannot help being impressed with the number of lodes which ran directly into your property, and there is not the slightest doubt but it will prove to be a valuable property. There is plenty of timber on the property for all immediate mining purposes, and the Government dam is well within one mile of the property, where there is an inexhaustible supply of water always to be had. These are great advantages from a mining point of view. The board are advised that this lode will afford ample occupation for this company for a great number of years, with every prospect of success." I should like to know if that lode will give occupation to the company for a number of years. I will ask one further question before sitting down. I understand the Chairman to say that the whole of the calls had not yet been made.

The CHAIRMAN: I said the whole of the calls had not been paid up. We do not want the money at present, and we have not pressed for payment.

Mr. KITTO: With regard to the Green lode, that was the Green lode referred to in the prospectus, but not the lode that I referred to just now as passing diagonally through the property. We have no reason to doubt that there are at least five lodes running through the property, but, of course, up to the present we have not had an opportunity of ascertaining. We have not been in a position to exploit all these lodes. I quite see the force of the gentleman's remark about the lode affording ample occupation for a considerable number of years. So far as I am personally concerned, I have not a shadow of a doubt on that point. This lode, although somewhat small on your property, may possibly prove to be the main lode after all; but Mr. Hawke, who has such a thorough knowledge of the locality, could scarcely recognise the lode according to its size as seen in the other properties.

Mr. BONNARD: Do I understand that the Green lode existed on the property at the time the company purchased it? When your engineer, Captain Hare, went there, he was uncertain whether it was a distinct lode or the leader of a big lode which was known to exist on the adjoining property.

Mr. KITTO: Yes, that is so.

Mr. BONNARD: There is this to be said—There exists a lode on your property sufficient to keep your men working; yet at the same time I think ordinary prudence and care should first be used in developing the resources of the company—that is to say, if the directors think there is another lode, 30 feet wide, passing through the property, it is their first duty to demonstrate that. The first thing certainly is to ascertain what we have got, and having ascertained that, to develop the resources of the property in a perfectly thorough manner. I think the statement made by Mr. Kitto is a full and lucid one, and that we can very well leave the future of the company in the hands of the directors.

A SHAREHOLDER: What is the nature of the supply of water? Has it been brackish, or is it suitable for the purposes of mining?

Mr. KITTO: It ought to be very gratifying to the Chairman and the directors to find that the shareholders take such an intelligent interest in the affairs of the company. With regard to the water, it was generally very well known that the water in the district was not only very brackish but unfortunately very salt. But that is a matter which will be overcome in time. I had nine years in Australia, four years as a digger, and five years as one of the most successful mine managers in the country. I remember when working on Yorke Peninsula that it was thought we should have to cease working, as the water met with there was as salt as the sea, but it gradually toned down. It is in consequence of the difficulty with regard to water that I referred to managers being sent to Western Australia who were not competent to deal with such things. Wherever there is plenty of gold there is always some means of obtaining it. I and others are at present engaged in making experiments for the purpose of extracting gold in a different manner to what has been tried in any other country, and I have not the least doubt that we shall perfect our method. In a short time I hope to be interested in a patent which will solve the difficulty, but it will be something different to the amalgamation process. With regard to the labour question, we shall have to take our chance with everyone else. If the mines are rich we can afford to pay a higher rate of wages, and that will attract a sufficient number of employés.

Mr. BONNARD: You think the water difficulty will be remedied soon?

Mr. KITTO: Yes, I do, without a shadow of a doubt.

The CHAIRMAN: What you have suggested should be done, Mr. Bonnard, is exactly what the directors intend to do. They propose not to stop at one lode, but generally to explore the whole of the mine.

Mr. BONNARD proposed a vote of thanks to the Chairman and directors, adding that he did not think the shareholders need have any fear with respect to water. The Government had voted £100,000 for the sinking of wells, &c., in order that the different gold mining districts might be well supplied with water.

The vote was seconded by Mr. TURNER, and carried unanimously, and the CHAIRMAN having briefly replied, the proceedings terminated.

WHITE FEATHER EXTENDED, LIMITED.

The statutory meeting of this company was held on Saturday, the 18th inst., at the Cannon-street Hotel, Mr. Alderman M. J. HAWKES (Chairman of the company), presiding.

The SECRETARY (Mr. Joseph Robertson) read the notice calling the meeting.

The CHAIRMAN said: Gentlemen—We have met to-day to comply with the Act which necessitates that a statutory meeting should be called within four months of the registration. It does appear to me that it is almost unnecessary for gold mining companies to be compelled to call their shareholders together so soon, because there are no means of developing a mine in so short a time as that; but it has this great advantage, that it gives the directors an opportunity of meeting the shareholders and explaining exactly what they have done up to that point. I am pleased to be able to tell you that we have the transfer of the company complete. Unfortunately, we have been most exceptionally placed with regard to the development of the mine. During the time we have been in possession of it the exemption from the labour clauses of Western Australia has been in force, and it has virtually been closed for two months and nothing has been done. Arrangements, however, have been made by which I believe we commence work on Monday next, the 20th, when the time of exemption ceases. I may say that the directors have every confidence that this property will prove a most valuable one. I should like to give you one or two quotations from the reports which we have had from Mr. Colin McCulloch and Mr. Henry Wright. I am not going to read the whole of those reports, but there are certain remarks in them which I think it well to bring before you to-day. Mr. Colin McCulloch says:—"There are at least seven well-defined reefs traversing your property." Further on he says:—"In one important feature your property is unique. The occurrence of so many gold-bearing reefs, and their relative positions, combine to make your 6 acres much more valuable than most mining areas of five times the size. Thus one working shaft alone is sufficient." With regard to the water difficulty, he says:—"The water difficulty is practically solved at the White Feather, abundance being obtained by sinking. Judging by the evidence furnished by the other mines in the neighbourhood, and the general indications, you will probably strike a sufficient supply at a depth of 130 feet. A public crushing battery is being erected in the near vicinity, at which you can continuously and profitably crush without troubling yourselves concerning water supply, or the erection of your own working machinery." Mr. Wright says, corroborating that:—"The main features of the property are the number of reefs which have been discovered running more or less parallel to each other, all of the reefs being highly auriferous." With regard to the water difficulty, he says exactly the same as Mr. McCulloch, so we feel that this property will be easily worked. In addition to that, we have made arrangements, through Mr. McCulloch, for the working of this mine, and we look upon that as rather an advantage, because the report he has given shows he has faith himself in the company, or he would never have undertaken the management of it. No doubt the White Feather district is known to most of you, because the quotation on the Stock Exchange to-day for the White Feather Reward, which is the company adjoining our own, is above £2. If we in the course of a few months can approach that figure, we shall all be satisfied; at all events, the directors intend to push forward the development of the mine as fast as possible. It is not our intention at the present moment to put up expensive machinery. We shall, of course, take the advice of experts. One expert, Mr. Loudale, a gentleman largely interested in the district, has gone out, and is going to give us his own report, and to assist in the direction of the mine out there. Another thing we intend to do from time to time is that, as we receive these reports, we intend to communicate them by circular to the shareholders, who will thus know exactly how we are going on. We shall not meet again now for some short time, but I have no doubt that when we do we shall be able to present a report and balance-sheet with which you will all be satisfied, and we shall be able to give you, I trust, a very large dividend. As I have said, to-day's meeting seems almost unnecessary, because there is nothing to report upon, and there are no resolutions to pass; but if there are any questions put which I can answer, I shall be very pleased to reply to them. Mr. Woodyatt, a member of the board, has been out there, and if you wish to ask him any questions he will be glad to answer them. In conclusion, I may say that our belief is that the company is absolutely good, and that it will prove a very grand thing for the shareholders; but as yet we have not had the time to develop the property.

In reply to SHAREHOLDERS, the CHAIRMAN said their property adjoined the White Feather Reward Mine—absolutely on the side of it. The number of shares issued to the public was 10,426. They had nothing to pay the promoters, who took £20,000 in fully-paid shares, and as to the other £20,000 that was to be paid either in cash or shares, at the option of the directors. They had entirely settled with the promoters.

General HUTCHINSON moved a vote of thanks to the Chairman and directors, which was seconded by Mr. MOORE, and carried unanimously.

The proceedings then terminated.

LIGHT OF ASIA AMALGAMATED GOLD MINES COMPANY, LIMITED.

The first ordinary (statutory) general meeting of the shareholders in the Light of Asia Amalgamated Gold Mines Company was held on Monday, at Winchester House, under the presidency of M. CURWEN SISTERTON (the Chairman of the company).

The SECRETARY (Mr. E. N. Dawe) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—You have heard the notice convening the meeting read, and you are also aware that this meeting is a purely formal one, held in compliance with the Act of Parliament, which requires that a statutory meeting of the shareholders shall be held within four months of the registration of a company. I regret that the attendance of shareholders is so small, as I have a little pleasing information to give you, summarising as it does what the directors have been able to accomplish since the formation of the company. The capital of the company was considerably over-subscribed at the time, and the allotment was made as impartially as possible. The result of that is a working capital of £20,000, with 10,000 unreserved shares for future issue when occasion requires it, so that this company has an ample and sufficient working capital. The property has been duly transferred to the company, and that property, as you are aware, consists of two leases—namely, the Light of Asia lease and the Queen of the Main; and, from the reports which we have had from time to time of these two properties, we are convinced that we have in them very valuable possessions indeed, which will, when properly and systematically worked, turn this company into a handsome dividend-paying concern. Since the acquisition of these two mining leases I am happy to be able to inform you that we have increased the mining area which we possess by the further acquisition of something like 19 acres, making a total altogether of 38 acres. Therefore, the shareholders are now in possession of considerably more property than they held when the prospectus was first issued. Then, gentlemen, the machinery, consisting of 20 head of stamps, has been ordered, and is now on its way to the mine, so that, all going well, we shall be in a position to crush about the middle of May. We have a very large body of payable ore in sight—sufficient, it is estimated, to keep this battery going for fully two years. This ore is of a very payable character, and we are confident ourselves that every expectation which we have had as to the value of this property will be more than fully realised. The lode, as you are aware, is an exceptional and phenomenally wide lode. It is 12 feet wide, and the length of it is all through the property; and, from information which

we have since received, we are informed that this reef is supposed to extend for something like 3 miles. All the land has been, therefore, pegged out for a distance of fully 3 miles further away than where our property extends. I do not think I have anything more to say than that the directors thoroughly believe in the value of the property, and trust that the next time they have the pleasure of meeting the shareholders they will be able to demonstrate their belief in the property, by showing some handsome and remunerative results. We shall be happy to answer any questions that may be asked.

There being no questions, the proceedings terminated with a vote of thanks to the Chairman for his presidency.

THE GREAT BUNINYONG ESTATE GOLD MINING COMPANY, LIMITED.

The first ordinary general meeting of this company was held last week at the offices, Throgmorton House, Copthall Avenue, E.C., under the presidency of the Hon. J. H. H. BERKELEY.

The SECRETARY having read the notice convening the meeting, The CHAIRMAN said: Gentlemen—This is the statutory meeting which under the Companies Acts every limited company is compelled to hold within four months of its incorporation, and as the Great Buninyong Estate Gold Mining Company (Limited) was registered on September 19, the statutory meeting had to be held about this date. As you know, gentlemen, these meetings are almost always of a purely formal character, and it is not often that the directors can give the shareholders much more information than was contained in the prospectus. I am, however, glad to say that to-day I am able to give you some good reports as to the progress made since the company was formed; but before doing so I will deal with the questions of title and finance. First, it is my pleasant duty to tell you that the vendor has been fully paid and settled with, all the money and shares due to him have been handed him, and the property is fully vested in the company. Then as to finance. The full amount of working capital that was stipulated for by the directors—viz., £20,000, was subscribed for, and much of it has been fully paid up, and as this sum of £20,000 was £5000 more than was estimated to be necessary by the experts who reported on the property, we ought to have no anxiety as to there being ample funds at our command to carry out the work requisite to put our mine on the list of dividend-paying concerns. Now as to what has been done. We have been hard at work on a new shaft on our freehold, on which we placed a small engine and winding gear with a view to getting down on the alluvial, which is known to be near by on what is called the United Leads, a continuation of the junctions of the Buninyong, The Union Jack, and Bowen's Hill leads, and we have sunk a shaft 10 feet 6 inches by 4 feet in the clear, which is now down 94 feet in solid rock. Work has been prosecuted continuously by three shifts of men, and progress has been greater than expected. From the underlie of the strata it is to be inferred that the Stone Quarry gutter will be found in close proximity on the north side of this shaft, instead of the south, as was formerly expected. This will be found advantageous, and enable us to intersect it, and also the United Leads with one level to the north, instead of having to open a shaft both north and south as formerly anticipated. At this depth the inflow of water has increased considerably, and it is not possible to deal with it any longer with bucket capacity, and we have, consequently, had to stop here while powerful machinery which we have purchased is being erected. This machinery consists of a pumping engine and gear complete, winding engine and gear, and two boilers. These would ordinarily have cost from £4000 to £5000, but I am glad to be able to tell you they have been acquired for the moderate amount of £1300. Contracts were some five weeks ago entered into for the machinery and necessary buildings to be erected within 12 weeks of that date, with heavy penalties in the event of delay and a bonus for earlier completion, and we have heard from Mr. Spain by cable that good progress is being made with the erection. With regard to the necessary pump, it has been thought advisable to wait until deeper sinking shall have convinced us of our actual pumping requirements before purchasing any. I would ask you to remember that your property is situated in a district where there are as fine foundries for producing mining machinery and requisites as anywhere in the world, and we, therefore, propose, as soon as the erection of the pumping engine is completed, to take on hire for the present a 10-inch column of pumps. This may suffice to put the shaft on to schist, and if so no increase in the quantity of water is apprehended until the level is put in, and the rise goes into wash dirt; but if schist is not met with until the level of the gutter has been nearly reached, increased dimensions of column will be called for, and we may gradually have to advance from a 10 inch to a 12 inch, 16 inch, or even a 20 inch column before getting the shaft bottomed. Meanwhile, the pumping and winding gear we had at work on the new shaft has been removed to the east shaft to work the quartz. That shaft is down about 330 feet, and the telegram received from our legal manager informs us that he expects to strike the reef in about seven weeks, and he adds that the reef has been found to have payable quartz in the adjacent mine, near the boundary at east shaft. I am sure you will consider this most satisfactory, and, gentlemen, let me remind you that your property is in no new district, where at present little or nothing is known of the nature of the reefs, or whether they will continue in depth. We are on a proved field where the reefs are known to be permanent, where they are at the moment being worked, and worked successfully at depths down to 2000 feet. We do not look for sensational returns of crushings showing a fabulous number of ounces per ton, as we sometimes see in reports from some new fields. We know we are on a field where our mine will pay handsomely if the reefs give anything over 4 dwts., and that if it carries over that amount it will pay to work it even down at 2000 to 3000 feet. The appointment of engineers in Victoria has been conferred on the firm of Matthews and Richardson, who represent the largest mines in the colony, both alluvial and quartz. The post of manager has been given to Mr. J. Richardson, a miner of great experience, thoroughly well acquainted with the Buninyong, and who, indeed, previously had charge of the underground working in the mine, and who has such confidence in our mine that he has acquired a large number of shares in our company. We have been most fortunate in securing the services of Mr. W. E. Spain as our local manager, a gentleman under whose able management the celebrated Star of the East, on the same field, has been so successful, and with the co-operation of the Hon. R. T. Vale (a member of the Victorian Cabinet, whose mining experience is large), and of Mr. Clyde Norton (who is a well-known accountant), as members of the local board, I feel sure our affairs will be well looked after in Australia. Here in London your directors have secured the services of Mr. Thomas Cornish, M.E., as their consulting engineer, a gentleman well known as a mining authority, and who has known your property for many years, and holds a high opinion of its value. We believe it will be satisfactory to shareholders that, in addition to the able local management available, they will have the advantage of the opinion of an experienced mining authority upon this side. Gentlemen, you have a property of vast size, one of the largest, I believe, in Victoria, consisting of some 882 acres, and which may be described as constituting a gold field rather than a gold mine, and which will in the future doubtless admit of our letting off portions to subsidiary companies, which should be a source of no inconsiderable profit to us. In it are known to exist six reefs, which have been successfully worked outside its boundaries, and it contains unworked alluvial gutters, which are estimated by such high authorities as Mr. Murray and Mr. Krause (the heads of the Mining and Geological Departments in Victoria), to extend for upwards of 3½ miles, and which gutters, judging from results obtained in former years, are almost certain to be very rich in gold. May I call your attention to what Mr. Main, the reporter of the *Melbourne Argus*, has said of this mine:—"The advantages which this mine offers for investment of capital have no equal that my

long experience can call to mind. No prospecting is needed to find where quartz or alluvial gold exists, all difficulties in the way are known, the cost can be pretty accurately estimated, nothing is required but capital to reach and work the proved rich gutters and the proved auriferous lodes. With good management it should be as safe for investment as paying money into a sound bank. At the time work was stopped . . . it had raised 87,067 ounces . . . which were sold to the Bank of New South Wales, Ballarat, for £349,249 10s. 8d., and I have no hesitation in saying I believe there is considerably more gold now in the Great Buninyong Estate Gold Mining Property than has ever been taken out of it." I have told you the steps we have taken to assure a careful, energetic, and economical management of your property locally, and I can only assure you that my colleagues and myself will do all that in us lies as business men to see that you reap the full benefit which we believe will accrue from the property.

Mr. THOMAS CORNISH then spoke as follows: I am glad of the opportunity to state in the presence of this meeting that I am personally acquainted with the property. I was one of the pioneers in the early history of the Victorian gold fields, upon which I worked as far back as 1857. I consider that the property you have acquired, gentlemen, is a thoroughly valuable one, and a favourable feature about the commencement of the operations therein, and one which I may say is also an unusual feature in the history of many mining companies, is that the directors, as much at home as in Victoria, have started work in a thoroughly practical, business-like, and common-sense manner. I may also say that I am personally acquainted with Mr. E. W. Spain, local manager, and a member of your board in Victoria, and know him to be thoroughly practical, painstaking, and efficient in matters pertaining to gold mining. I also know the plant which the Chairman has just stated you have purchased for £1300, and I have no hesitation in saying that that plant, which is practically as good as when it came from the foundry, having been little used, must have cost somewhere between £4000 and £5000, so that the company may be congratulated upon having made a good bargain in this respect.

The CHAIRMAN invited any questions on the part of members present, and

Mr. G. EVANS having proposed, and Mr. DAGNALL seconded, a vote of thanks to the Chairman, which was carried unanimously, the proceedings terminated.

THE TOKATEA OF HAURAKI, LIMITED.

An extraordinary general meeting of shareholders in the Tokatea of Hauraki (Limited) was held at Winchester House, on Tuesday last, for the purpose of passing resolutions amending the Articles of Association so as to bring them into conformity with the Colonial law. The chair was occupied by Mr. CECIL HARTRIDGE.

The SECRETARY (Mr. E. W. Fellgate) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—You have been called together to-day in order to pass resolutions which have been circulated amongst you. The company are compelled to pass these resolutions, otherwise our properties may be forfeited. It appears that an Act of Parliament has recently become law in the colony which makes it incumbent upon every foreign company, such as ours, to open a local office and register of shareholders, and also to appoint a power of attorney to act for the company in the colony. It is not for us to discuss whether this will be an advantage to English shareholders, although I may tell you that my experience, from a Stock Exchange point of view, is that it will not have the effect of depressing the price of your shares, because the colonists are very anxious to become shareholders in some of the companies located here, but are practically debarred from doing so on account of the difficulty in registering transfers. I think this desire shows the very healthy interest that is being taken in the gold mining industry on the other side of the water, which is very satisfactory to us. At the same time, if shares are transferred from the register in London to the register in Auckland, there will be fewer shares here to deal in, and I should imagine the price here would harden. I do not think there is anything for me to explain. There are only the three points—that is to say, the opening of a local office, of a local register, and the granting of a power of attorney. Those points are all covered by resolutions, which I shall call upon the secretary to read. Before I sit down I should like to tell you that work at the mine is going on in a very satisfactory manner. Captain Hodge has already got on gold, and I am informed that within the next week or so we shall probably be hearing of a trial crushing. Captain Hodge is going to endeavour to put 10 or 20 tons of quartz through the mill in order to give you an idea of the possibilities of the mine. In sinking a winze in No. 7 level he has come across gold all the way down. The winze is now more than 40 feet in depth, and gives every indication of good gold continuing to go down as the winze is sunk. In addition to that there are four other reefs and the ordinary mining operations are being pushed forward in the most energetic manner. In fact, I believe Captain Hodge is just at the moment paying a great deal of attention to Tokatea, and I am told from private information that there is every reason to hope that Tokatea will turn out even as successful as the famous Hauraki Mine. I have this morning received a telegram from a friend of mine out there saying:—"It is reported in various places that a new discovery has been made on the Coromandel field." It does not say where the discovery has been made, but I can only hope that it is in your property. If it is, you shall be advised of the fact as soon as it is known. (Applause.)

The SECRETARY then read the resolutions, which were formally moved from the chair, and seconded by Mr. RUSH.

The CHAIRMAN, speaking in answer to a SHAREHOLDER, said that the law which made it necessary for the resolutions to be passed had already come into effect, and they were given until March 1 to conform to its requirements.

The resolutions were then put and carried unanimously, and a vote of thanks to the Chairman terminated the proceedings.

AFRICANA, LIMITED.

The first ordinary (or statutory) general meeting of the shareholders of the Africana (Limited) was held on Tuesday, at Winchester House, Old Broad-street, E.C., Mr. LIONEL R. C. BOYLE (the Chairman) presiding.

The SECRETARY (Mr. Robert Randall-Stevens) read the notice convening the meeting.

The CHAIRMAN, who was received with applause, said: Gentlemen—We have no accounts to present to you, and, under ordinary circumstances, I should content myself with the usual platitude of saying that this is only a statutory meeting; but you will expect something more from me on this occasion. (Hear, hear.) I think we must all admit that, even stretching the word to its greatest elasticity, the circumstances under which we meet to-day are far from ordinary; and although I think we may congratulate ourselves, and fairly congratulate ourselves, that in the last week or 10 days things have changed somewhat for the better, yet the storm signals are still hoisted in some quarters, and it must take time before the war clouds, which have been hanging over us rather thickly of late, are dispersed. In times of political disturbance the tongue of rumour wags, as a rule, more persistently than ever, and, therefore, I think it is incumbent on directors, when they meet their shareholders in times like these, to treat them with the greatest candour. (Hear, hear, and cheers.) It is somewhat difficult, in view of the lamentable, disastrous, and unprecedented state of affairs that have taken place in the Transvaal lately—a state of affairs which the wildest flights of imagination could not have anticipated, and which nobody could have foreseen, and as to the inauguration of which everybody denies complicity, and, therefore, I suppose we must be asked to believe arose of itself—(laughter)—which ignorance, no doubt, accounts for

the persistent fall in South African shares—I say in circumstances like these it is somewhat difficult to discuss your assets as if the position were normal; but that is the task that has been set me to-day, and I shall endeavour to fulfil it to the best of my ability. (Cheers.) My subject naturally resolves itself into two parts—first, what has been done in the past; and, secondly, what are our hopes and anticipations for the future. With regard to the past, your company was registered on September 23, 1895, for the purpose of taking over a very large block of assets from the New African Company, which I shall describe in detail later on. The authorised capital was £1,500,000 and the issued capital £1,075,000, of which 400,000 shares were issued fully paid up in part payment of the assets—or, perhaps I should say, will be issued; for all the assets have not been delivered at the moment—and the company had a working capital of £250,000, and also £40,000 of reserve, which, although perhaps not applicable to the payment of dividends (for I believe that is a disputed point amongst the legal fraternity), is still applicable for the ordinary business of the company, and has been so employed.—The working capital. Of your £250,000 working capital, the bulk of it is on deposit with the bank, I am sorry to say, gaining a very slight interest; but we thought it advisable during these critical times not to launch out to any great extent, but to wait for a better opportunity of employing your money. With regard to the future, I may say at once that the progress of the company is inseparably connected with the progress of South African mining and kindred interests in the Transvaal Republic. We have no interest, no assets, in what is known under the generic term of Rhodesia, or Charteredland—not that we wish to throw the slightest reflection on that great country, but up to the present we think it too speculative for the investment of your capital, because we do not know that it has been proved beyond a doubt that any of the mines in Charteredland are paying or permanent. I do not pledge the board that we shall not take an interest in that country, which, we all candidly hope, will succeed. Nor have we any interest in the deep levels, because I do not know what that term means. In the Van Ryn Company, in which we have a very large interest, its shaft is down 640 feet, and is not considered a deep level. In the French Western Nigel we expect to strike the reef between 200 feet and 300 feet, and that is a deep level. We have not, except in one case, an interest in any company in which we do not expect to strike the reef at a depth of 500 feet. The easiest way to run through the assets we have and give a description of each, is to begin with the west end of the Rand and run right through Goldmann's Map to the east. The first company in which we have an interest is the Aurora West United. That company has a capital of £140,000, of which, up to now, only £100,000 has been issued. It has been working for some time, and I had at one time the opportunity of looking regularly through the reports from that mine week by week, and month by month. I came to the conclusion at that time that the Aurora West was an extremely valuable little property. The reef is narrow in some parts, but very rich. It runs 7 dwts. or 8 dwts., and by a little sorting that could be brought up to 10 dwts. or 12 dwts. It has a 40 stamp battery, a cyanide plant capable of treating 4500 tons a month, and the work for some months has been limited to that of development, because one of the faults with the management in the past was that the stopes were not kept ahead of the mill, and so the mill had frequently to stop. All of you who know anything about mining are aware that this is a great disadvantage to a mine, and I think the Aurora West, which is the only mine in the control of which we have no part, as we have no one to represent us on the board or local committee, will give a fair remuneration for the money invested in it. Passing on now through the town of Johannesburg, we have a small interest in a company called the New Era, with a capital of only £80,000. It was formed for purchasing small plots of land in different parts of the Rand, and I believe some of those purchases have been exceedingly well made. They have small plots round the Langlaagte and the Simmer and Jack. With regard to the land round Simmer and Jack, it has lately been amalgamated with that of other owners. I believe all the documents have been signed, only there is a dispute as to who is to find the money; but it is of this sort that they are all anxious to do it. The new combination will have a capital of £750,000, a working capital of £200,000; for, being a deepish level—and this is the only interest we have of the kind—the capital has to be large. We next have a considerable share in a property called the Western Kleinfontein, which is marked now on the map as the Spartan Block. The mine was exceptionally well pegged out, so that there is 5000 feet of reef. There are two sets of claims, 36 each, or 72 in all. Dr. Hatch, who is very well known in the Transvaal, made a report that there were two distinct reefs running through the property. One outcrop just outside the boundary, and the other outcrop inside the boundary. From the outside, or northern one, he estimated we should have 1,400,000 tons of ore, and from the lower one 800,000 tons, in all 2,200,000 tons. In order to get an idea of the value of this property, I may tell you that it is the same reef that runs through the Modderfontein, the Chimes, the Van Ryn, and the Kleinfontein. The Van Ryn I shall describe later. The other property ran between 25 dwts. and 30 dwts., over a 3 feet reef; Kleinfontein 10½ dwts., and Chimes from 17 dwts. to 19 dwts., over a 3 feet reef. I believe I am right in saying that you may take it as an axiom that any property worked on a sufficiently large scale, and running anything over 10 dwts., should pay at least £1 per ton profit, if all modern appliances are used. When I have told you that you have 2,200,000 tons in this Western Kleinfontein property, I think you can make the calculation as to what that mine is worth. Passing in a north-westerly direction, we come to the three Van Ryns, consisting of Van Ryn Estates, Van Ryn West, and Van Ryn North, or as my friend, Mr. Stuart Hogg, the esteemed secretary, rather pithily put it, "a parent company with a very healthy child and a very promising infant." (Laughter.) The Van Ryn itself has been working for a considerable number of years, and has just paid a dividend of 20 per cent. The property I believe to be extremely valuable. The assays last month, taken over a 30 feet stop, ran 1 ounce 7 dwts., 8 dwts., 10 dwts., 14 dwts., 11 dwts., 2 ounces 7 dwts., and 1 ounce 2 dwts. A great difficulty the Van Ryn has to contend with has been its very inefficient and badly-constructed mill. They are now putting up a mill of 80 stamps, with all modern appliances, capable of crushing 4½ to 4½ tons per head per day. The old mill was badly placed, and was continually breaking down, thereby augmenting expenses and reducing profits. I do not know what effect the recent troubles may have in stopping work, but this new mill should have been in working order about February or March next, and it is confidently believed by the directors, who have studied it for a great number of years, and Dr. Magin has also laid it down as his firm opinion that that mine should turn out a profit of £8000 a month when that mill is erected and at work. There are in the Van Ryn 6,000,000 tons of ore, and there are probably very few men in this room who will live to see it worked out. Van Ryn West—the Van Ryn West, an offshoot of Van Ryn Estates, has a capital of £170,000, of which the Van Ryn proper owns 70,000 shares. The Van Ryn West will also have a mill of 80 stamps, which will be put up and finished very much about the same time as Van Ryn Estates; but I may tell you that Van Ryn West is not developed to the same extent, and may take a little longer before it earns the profits which we hope will be equal to Van Ryn Estates. The latter is down 640 feet and Van Ryn West only 220 feet. The Van Ryn West has 3,500,000 tons of ore—I do not say in sight, but that is the estimate if there are no faults in the mine. Taking that also as £1 per ton profit, you can easily estimate the value of Van Ryn West. With Van Ryn North we have had difficulty about the licensees. There are people out in every mining camp who try to make themselves disagreeable by jumping claims, and we have had difficulty from that. I believe the matter is now settled, and we have 3500 claims—an enormous property. We have also lately bought a portion of the Busters part of the farm, for which we paid £5000, and I believe it to be very cheap. Lately we have discovered coal on that property, and although we were anxious to give you an opinion as to its value, I

cannot do so to-day; but should it prove to be valuable, you can see what a great boon it will be for these three companies if they can get their coal, and within their own ground, for their stamping mills. Coming down to the Heidelberg district, we have an interest in two properties closely touching the Nigel Mine. One is known as the French Western Nigel, which has a capital of £300,000. We expect to erect 50 stamps. Provision has been made for striking the reef at 500 feet; but within the last week we hear it is confidently believed that the Nigel reef strikes in a more westerly direction, and the outcrop, instead of being some distance from the property we own, will be closer, and we may strike the reef at 150 feet or 200 feet instead. (Cheers.) When I tell you it costs £20 a foot to sink, you can imagine that this will make a difference in the initial cost. This property is supposed to have 194 claims. This is the only fault I have found in Mr. Goldmann's excellent book; but it was not through any fault of his when, after we had purchased the property, 15 claims were without a clear title, and, therefore, we had to reduce the purchase price and knock off the 15 claims, the number now appearing as 179. My figures, therefore, do not differ from those on the books. The estimate of the amount of ore in each claim in that property is 5000 tons—179 claims, and 5000 tons in each. We expect to sink 2 feet a day. At the present time we have some large boring drills on the property for the purpose of finding out exactly where the reef is, so as not to make any mistake when we begin to sink the shafts. Passing across that Nigel property, we come to the Transvaal Nigel Company, which has a capital of £350,000 and 200 claims. The 200 claims, I believe, are estimated to produce, supposing the reef runs as rich as the Nigel, and the Nigel has paid £3 4s. per ton in dividend—well, I would not like to say what it is worth. If I had it the Chancellor of the Exchequer would read the report of my death with more satisfaction than regret. (Laughter.) In the vicinity of the Nigel properties we have also an eighth interest in 12 large farms; that is to say, we have the option to purchase these farms—a system frequently adopted in that country. You pay a small yearly sum for the purpose of holding the option, and you have time to develop it. If you choose you may convert the option into a purchase. Well, we have 12 farms on that system. The yearly expenses are small, and in very few cases does the value of the farm itself exceed the price of £9000. We tried to get some of these options renewed some time ago, and we were laughed to scorn, because people can now get far better option prices than they could when we were fortunate enough to get hold of these. On one of these farms, Boschfontein—we did not choose the name—(laughter)—we have done some prospecting work, and struck gold. It is not very rich; but we hope that as we sink deeper—it is only down 70 feet—we shall come across the Nigel or some other reef, which is confidently believed to run through that property and some other farms. I cannot tell you what the value of these farms is, but experts put a considerable value on them. We have also a very considerable interest in a coal mine, called the Douglas Colliery, about 45 miles from Pretoria. This property has only lately been formed into a company, with a capital of £200,000 of which we own nearly one-half. The working capital is £25,000 and there is a reserve of £25,000. The working capital is small, for the reason that the property can be worked by adits, and requires no expensive pumping or hauling machinery. The mine is perfectly dry and the reef is exceedingly hard, so that it does not require to be timbered, and the strata being perfectly flat, they can be worked by manual labour right to the mouth of the mine. I am afraid I am confusing you with my millions, but the estimated number of tons in that mine is from 7,000,000 to 10,000,000, and these are only in the upper strata. The upper strata are divided from the lower by a thick sandstone belt, and the lower strata of coal have been sunk on 19 feet, and they have not touched bottom yet. The lower part is almost equal to the upper in increasing the life of the mine. As to the value of that coal, the Netherlands Railway Company, which runs within 3½ miles of the property, takes from us 2500 tons a month. We have had orders to supply 2000 tons a month for the Delagoa Bay shipping; but, unfortunately, we have not been able to complete the contract, because the Portuguese part of that line is blocked. They have not sufficient locomotives, and there are 300 tracks blocking the traffic; so that we could not enter into a contract to supply the shipping, for the reason that we did not know whether we should have rolling stock to take the coal to the port. The only competitor that we had in that district, I am happy to say, has turned out to be a comparative failure. This coal was tried in one of the German steamers, and condemned as utterly useless. Our coal has been tried, and the steamers will take (if we can supply them) 2000 tons a month. The colliery has also entered into arrangements with the Robinson and Chimes Mines to supply them with a very good smelting coal. In addition to the value of the coal itself, we have in the bottoms of each of the layers of coal some extremely good coking coal, and I think after a time machinery will be ordered for the purpose of providing a coking plant to supply the mines of Johannesburg with all the coke they can acquire at a cheaper price than it can be imported from England. A contract has been given to build the 3½ miles to the Netherlands Railway, and should be completed in March next. We have also an interest in the Rand Central Ore Reduction Company—one of the kindred interests to gold mining from which large profits are to be made. Last year the company made a profit of £40,000 by treating about 357,000 tons of tailings, and they have still 1,000,000 tons of tailings belonging to them. They have put up in the Robinson Mine, at a very large cost, a plant for the purpose of treating slimes, and it is confidently hoped that they will be able to treat them at a profit. When I tell you that the Robinson Mine has 500,000 tons of slimes—and the Robinson is not the only big mine of the district—you may imagine the enormous advantage it will be if the slimes can be treated profitably. The returns from these slimes we should have had already had it not been that the Robinson would not let the Rand Central Ore Reduction Company begin work, because of the scarcity of water. It wanted the available water for other purposes. I believe we should have had returns even now; but, unfortunately, Mr. Butters is one of the gentlemen who is at present languishing in the lock-up at Pretoria. When he comes out I hope an attempt will be made to see what can be done with the Robinson slimes, and, should the plant be successful, we anticipate large orders. Already it is in contemplation to put up a large plant for the mines round about Van Ryn. They have investigated a system of reducing, by refining, the gold from the cyanide; so that, instead of sending the gold over here with the cyanide attached to it, the gold and silver will be refined on the spot, by which means the company will be able to get better advances from their bankers, and they do not pay the freight and insurance on the cyanide, which has to come back to the Rand, but only on the fine gold. This company owns also one-half of the Halske-Siemens process for treating tailings, which can by this process be treated at a cost of 2d. 4d. per ton when the ore is not over refractory. I think I have now exhausted the properties in which you are interested, and I may say, as a farmer once said about his large family, "There's not a scabby one amongst 'em." So I say that in your assets there's not a scabby one amongst them. They are all very valuable, and in most of them we have a very large interest. Now, just a few facts and figures for the benefit of our foreign shareholders. The Witwatersrand gold mines have produced since 1887, when the first crushings took place, 8,900,000 ounces, valued at £30,900,000 sterling. The annual average production for the last two years may be taken at roughly over 2,000,000 ounces, valued at nearly £8,000,000 sterling, but this is nothing to what will take place if we are allowed to work in peace and under normal conditions in the near future. Already we may expect an increase of the stamping power by 2263 stamps, and this is not including the 100 stamps apiece which it is believed the Crown, Langlaagte, Jumpers, Robinson, Nourse, and Rose Deep will shortly erect, which will add 600 more. I must also remind you that all these stamps are of the heavier pattern, capable of crushing 4½ tons a day; in fact, all anticipations lead to the belief that in five or six years time 7000 to 8000 stamps should be crushing 1,000,000 tons a month, producing 400,000 to 500,000 ounces, or 5,000,000 to

6,000,000 ounces per annum, and having a value between £17,500,000 and £20,000,000 sterling per annum. (Cheers.) I thought I would like to repeat those figures for the purpose of trying to get back some of the confidence which has probably been rudely shaken by the events of the last few weeks. In addition to the colleagues I have around me at the present time, we have also as a director Dr. Magin, who is second to none as a mining expert, as you all well know, in the Transvaal, and we are about to elect Mr. Pyrame Naville, a director of the Imperial Ottoman Bank in Paris, and Mr. William Pfizmajer, of the New African Company in Paris, as directors. This is only a statutory meeting, but my colleagues think it right (following the policy I foreshadowed of treating you with the utmost confidence) to tell that in the last month negotiations have taken place, and are still taking place, for the purpose of amalgamating this company with another old-established company very well known in South Africa. I cannot go further than to say that I believe the amalgamation will be mutually advantageous, but the negotiations are in that state that does not permit me to give you even the name of the company, or any further details. I may say that we have put off the statutory meeting of this company to the utmost limit allowed by the law (we are only within two days of the date when we must hold it), and this delay was for the purpose of giving you further information on the subject of this amalgamation. (Applause.)

Sir FREDERICK YOUNG moved a vote of thanks to the Chairman, which was seconded by Major COTTON, and unanimously carried, the proceedings thus terminating.

MENZIES PIONEERS, LIMITED.

The first general (or statutory) meeting of shareholders in the Menzies Pioneers (Limited) took place on Wednesday, at the Cannon-street Hotel, Mr. R. J. PRICE, M.P., presiding.

The SECRETARY (Mr. G. Carnaby Harrower) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This, as you know, is the statutory meeting of the company, at which we have no accounts to present, and which is merely convened in accordance with law. However, it is general on these occasions for the Chairman to take an opportunity of giving the shareholders any information which the directors may have concerning the condition of their property. First, let me deal with the initial steps of the company, and then I will proceed to tell you what progress has been made in the development of your property. The first thing I should say is by way of apology for appearing before you to-day, whereas I am not one of the directors mentioned in the original prospectus. There was, however, room for two directors on the board, and my colleagues very kindly and unanimously invited me to become a member of the board and take the chair. (Applause.) As you are aware, this company went to allotment towards the end of September, and I think there are 230 odd shareholders, of whom I am glad to say a considerable number are gentlemen who ought to have some knowledge of Australian properties. The working capital that has been secured for the development of your properties is £20,000 in cash and £20,000 in reserve shares, but if we have anything like the success to which I look forward I think we ought to be able to place some of those 20,000 shares, as we require the money, at something above par. The property was transferred to us on October 25, and since that time and up to the period of the usual winter exemption, the mine was no doubt being worked energetically by our managers. The most important thing in the early stages of a company is to arrive at a good system of local management for the property. Mining properties so far away are dependent for their success upon the local management, and I am glad to say we have secured for you what I believe to be a most admirable bargain with Messrs. Florence O'Driscoll, a firm of considerable repute in West Australia. On the Menzies field Messrs. Florence O'Driscoll have two most experienced men, one of whom, Mr. Ballard, acts as our general manager. Mr. Ballard is the gentleman who made a very able report on the property, so that he is interested in the mine, not only as an ordinary manager, but also as one who has got his own report to justify in the future. In addition to that we get the local services for the secretarial work of Messrs. O'Driscoll's establishment at Coolgardie, and we obtain that for a fee which is less, I believe, than we should have had to pay any ordinarily competent man sent out from England. We have thus got a good manager who is acquainted with all the local conditions—a very important matter—and in addition, if by any chance our manager was ill, Messrs. O'Driscoll have another experienced mining man on the spot, who would be able to take over the management temporarily. Then, again, we get the advantage of the advice of the same firm over here, and of their explanations of the reports sent over by their own representatives. Under the advice of Messrs. O'Driscoll we have dispatched certain machinery to the mine, but we have not sent crushing machinery. The machinery we have forwarded will be used for the development of the mine, instead of what many people consider a mine—namely, a hole in the ground, from which quartz could be taken out and crushed at a moment's notice. We want to bring your mine into such a condition that when we begin crushing we shall crush continuously, and our endeavour will be to keep up a good average. Some of the machinery to which I have referred is already at the mine, or, at all events, at Coolgardie, and the whole of it ought to be there by the middle of February. There are three reasons why we have not sent out crushing machinery at once. The first is that we want to get the mine in a proper state of development before we begin to crush. Secondly, there is a daily improvement taking place in dry crushing machinery, and if some really reliable dry crushing plant could be obtained, in all probability it would be best for our mine; but, in addition to that, all over the field different methods of crushing are being tried, daily experience is being gained, and if we can wait a short time—but we shall only wait till the developments of the mine justify our proceeding—we are more likely to get a really good type of machinery, suitable for the ore we have to crush. Thirdly, the railway is being pushed rapidly on towards Coolgardie, and ultimately I believe it will reach Menzies, so that if we can afford to wait until that railway is finished, we shall pay a very different price for getting our machinery on to the property. I have in my hand a financial paper of yesterday, which contains a letter from a correspondent in West Australia, and, speaking about this railway in Coolgardie, he says:—"It is expected that trains will be run into the outskirts of Coolgardie on the first week in February." He afterwards says:—"It now costs £12 to £14 per ton for carrying goods from the end of the line to Coolgardie, 40 miles, and in a few weeks this will be altered to a railway rate of perhaps £1 per ton." You will thus see that if it is the proper policy of the company to wait before sending your heavy machinery until you get this large reduction of rates, that will be the best plan to adopt. This brings me to the development of the mine, and I think you will agree with me that what has been done in that direction has turned out very hopefully and satisfactorily. As I have told you, earnest development did not begin until October 25, and the exemption from work commenced on December 8, and will last until February 1. Our managers, however, are taking every advantage of that exemption for precisely the same reasons as those which have weighed with us in the resolve not to send out machinery yet, because if there can be delay without expense it will make our ultimate expenditure very much less. I will now read you a cablegram which we have received from Mr. Ballard, our manager, but before doing so I should explain that, owing to the illness of Mr. Thompson, who is Messrs. O'Driscoll's manager at Coolgardie, and is responsible for the correspondence with us, we have received no letters and only a cablegram from him since we have been on the board, and the consequence has been that we have not been able, as we should have wished, to send out a circular to the shareholders prior to this meeting. We shall, however, upon the receipt of letters confirming this cablegram, probably send you a circular so that you may be in full

possession of the facts regarding the property. This cablegram runs as follows:—"The labour has been concentrated on lease No. 1404. The mines have not been worked since December 5. A vertical shaft has been sunk to a depth of 104 feet. A crosscut 14 feet in length has been made at the 37th level; there the width of the lode is 5 feet, and an average assay of the ore is 45 dwts. to the ton (2½ ounces). At the 104 feet level a crosscut 39 feet in length has been driven, and it cut a vein at 7 feet and 23 feet in this crosscut. Have driven upon the vein a distance of 32 feet. The average of the ore is 3 dwts. The vein at this point is very much broken up. Begin to doubt whether this is the Pioneer vein, as it changes its underlie considerably below the 40 feet level. I have already commenced to follow the underlie of the Pioneer vein from the surface downwards, and at a depth of 26 feet have opened a very powerful lode of solid quartz 6 feet in thickness, which averages in value 89 dwts. (4½ ounces) to the ton. Shall start driving north and south after sinking a further 11 feet, which will bring us to the 37 feet level, after which I shall sink a winze in more settled country." That is what the cable says about the main shaft. Then they have sunk another shaft in the east part of the property, and with respect to this the cablegram continues:—"East shaft. The depth on the vein is 30 feet; the average width of the vein is 2 feet, and the average assay of the ore is 23 dwts. (1½ ounce) to the ton. Shall resume work on February 1. Our prospects are undoubtedly good." That, I think, you will consider is a very satisfactory cablegram, inasmuch as it shows us that the upper levels, which were the first ones to be worked, will undoubtedly yield a considerable amount of valuable ore for us to crush at an early period of our career. Our manager's plan is to sink to the old 37 feet level, which was the first level we drove, where we will remember I told you there was 2½ ounces ore. He will crosscut right and left, and north and south, and then sink a winze following the underlie. He will then probably sink that to the 104 feet level, and will work whichever of the shafts may be most convenient for mining purposes. One shaft will practically be used for ventilation, and the other—the present main shaft or the new shaft now being sunk—will be the one upon which the principal amount of work will be done. I look forward to this mine having a very prosperous future. I am informed that Mr. Mercer, of Messrs. Bewick, Moreing, and Co., who is unable to be here to-day, has been down the mine much more recently than Mr. O'Driscoll, and is very much pleased with it. There are two other important points which I should like to mention. The first is with regard to fuel. Of course, when the railway is constructed we shall have no very great difficulty in this direction, and in the meantime we have instructed our representatives to lay in a good stock of timber for both mining and fuel purposes. As to water, I am told that the gentlemen undertaking to supply the mines with water from the lake below us are considerably advanced in their preparations, and it is believed the mines will be able to obtain water from that source within two or three months. But in case we are disappointed in that direction, I am glad to say we shall not have to sink very much farther in our mine without meeting with water. In a neighbouring property they have struck water at 150 feet, and a few feet lower a copious supply has been obtained; so that we may take it that when we get to that depth we shall find the same water conditions, and that Mr. Ballard's original report will be borne out in that particular. (Applause.)

In answer to Mr. CRUIKSHANE, the CHAIRMAN said that so far no arrangements had been made by the directors to obtain a report on the property from Herr Schmeisser, but no doubt when that gentleman visited the district they would have the benefit of his report. The Chairman added that Mr. O'Driscoll had told him that he believed he would be able to arrange to have a trial crushing of the company's ore made at a neighbouring battery. (Applause.)

On the motion of Mr. LOWENSTEIN, a vote of thanks was given to the Chairman and directors, and the proceedings then terminated.

MENZIES CONSOLIDATED GOLD MINES, LIMITED.

The statutory ordinary general meeting of shareholders in the Menzies Consolidated Gold Mines (Limited) was held on Wednesday, at Winchester House, E.C., the chair being occupied by Mr. THOMAS PHILLPOTTS.

The SECRETARY (Mr. Bedford McNeill) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This is the usual statutory meeting, called in compliance with the Companies Acts, which require, as you know, a meeting of shareholders to be held within four months from the date of registration of any Limited Liability company. There is no formal directors' report or statement of accounts to submit to you, but I may briefly inform you as to our progress to date. The company was registered on September 27, 1895, with a capital of £225,000, of which 15,000 shares were reserved. The 75,000 shares offered for subscription were much over applied for, and were allotted to 1216 shareholders. The whole of the purchase formalities have practically been completed, and we are hoping soon to learn that the company's claims are duly registered in Western Australia in the name of this company. I need hardly point out the importance to our future well-being of an able and qualified manager and local staff. In this, we believe, we have been exceptionally fortunate. Our manager, Mr. Thomas Weekley, was for 10 years mining manager of the Great Extended Hustlers Company at Bendigo, and Mr. W. R. Wilson, through whose kind offices the services of Mr. Weekley were secured, wrote under date November 18 as follows:—"I have no doubt whatever but that a most valuable man has been engaged, and only to-day one of the leading men on Bendigo assured me that Weekley was the most capable manager on that field." Mr. Weekley arrived at Coolgardie on November 29, and at once proceeded to our mines by coach. I will now say a few words as to the equipment and development of the claims, and in order that my remarks may be more intelligible, I have had prepared a cartoon, which hangs on the wall behind me. It shows the position of Menzies township, and a few of the claims placed approximately in their relative positions. Of course, you will understand that, for the sake of clearness, many claims have been omitted. Those shown on the cartoon are:—1. Claims coloured blue belonging to this company, divided as you know into two groups, the St. Albans and the Royal. The St. Albans group, 42 acres, belonging to the north, and the Royal group, 96 acres, to the south. The distance between them is roughly 6½ miles.—2. Claims coloured red are those belonging to the Menzies Gold Reefs Proprietary (Limited).—3. Claims coloured yellow are the claims belonging to the Menzies Cruso Gold Claims (Limited). Other leases, the names of which are, no doubt, well known to you such as the Lady Shenton (which was Mr. Menzies' original reward claim), the Florence, &c., are also shown. I may digress for a moment to refer to Menzies Waterworks (Limited), a company which many of you are aware was formed some few months ago for the purpose of bringing in salt water from the lake, approximately some 4 miles to the north of the St. Albans' group, or 6 miles from the Menzies Waterworks' receiving tanks on the Cruso East claim. This Waterworks Company is vigorously proceeding with the erection of its machinery and the laying of the necessary pipe line, and which main pipe line passes within about 1½ miles of the St. Albans' group, as shown upon the cartoon. It is probable that later some arrangement may be made for "tapping" this main pipe line as shown, and thus getting a supply of water for crushing purposes. I may add for your information that the pumps belonging to Menzies Waterworks (Limited) are calculated to deliver 10,000 to 12,000 gallons of water per hour to the reservoirs, on the Cruso East claim, and it is, I understand, proposed to put the pumping station and the mine into telephonic communication one with the other. Now we come to the south. With regard to the Royal claims, we have two alternatives. There is a lake some 8 miles to the south of these claims, and the question for decision is whether:—(1) Arrangements should be made for pumping water from the lake to the property.—(2) Whether a light mineral railway should

be constructed, and the quartz raised by us trammed down to a mill, to be situated at the Lake side. This matter is now being considered by our manager, and before arriving at a decision we necessarily await his mature recommendations with the figures and estimates of the two different schemes. I can now pass on to deal somewhat in detail with the several claims. As regards the mines generally, you will understand how our information is still practically confined to that given in the prospectus. The Gold Estates of Australia (Limited) have, however, been good enough to pass on to us certain information which they have received from Mr. Deseley, their manager in West Australia, who wrote under date October 22, 1895, as follows:—"I do not know what this Eva reef is going to make into. It is over 11 feet wide, now at about 130 feet, and goes from 4 to 5 ounces, very solid and full of iron pyrites. It is a beauty. I think when we get the water it will keep 100 heads of stamps going for longer than I shall last." And under date December 9:—"I just returned from Menzies, and while there I went again down Albans and Royal, and took samples; they are all looking as well as when I last reported, except the Albans, which has pinched considerably, but is making again, and is living in such strong country that I am not afraid about it going down. The Eva will prove one of the biggest properties on the field. I knocked my samples out of the floor at the bottom level, and got a return equal to 4 ounces 13 dwts. to the ton. This reef is as clearly defined as possible. It widens as it goes down, being 5 feet wide at 30 feet, 6 feet wide at 60 feet, and about 10 feet 6 inches solid at bottom." A cable dated December 10, 1895, from Mr. Jowett, sent to the Gold Estates of Australia (Limited), states:—"Am unable to alter opinion as expressed in our joint names—i.e., Messrs. Jowett and Deseley. Eva prospects are undoubtedly good. Will visit again; will write." And on the same day two cablegrams from Mr. Deseley, the manager of the Gold Estates of Australia (Limited), were received by them. The first message read:—"Royal: There is no change to report since my last report on the mine.—Albans: Pinched little since last report on the mine; widening again." And the second message read:—"Our joint report may be relied upon." The joint report referred to is that of Messrs. Jowett and Deseley, which appeared in the prospectus. As I have already explained, Mr. Werkeley, our new manager, arrived at Coolgardie on his way to the property, on November 29, actually arriving at his destination on December 3, and it was not until Monday last, the day before yesterday, that we received our first written communication from him. I will read it to you *in extenso*. It is dated Menzies, December 13:—"To the Chairman and board of directors of the Menzies Consolidated Gold Mines (Limited): Gentlemen—I have the honour to report having arrived on your mine on the 3rd inst., and at once proceeded to acquaint myself with the position, &c., of the various leases, &c., and proceeded with the erection of a camp, storehouse, stable, &c., which are now in course of erection. We are also getting in a supply of mining timber for immediate use, for which purpose we have purchased a wagon and team of four horses; we have also procured a buck-board (trap) and pair of ponies to enable us the more readily to visit the various portions of your property. I may here state that I am favourably impressed with the auriferous character of the whole of the various lenses. I shall at an early date have the pleasure of submitting to you my general report of your extensive mining property. I should have submitted this before now, but I wish to gain all the information I possibly can before doing so, and in a country where there are so many new features to study, it takes a considerable time to acquaint oneself with all the surroundings. I shall endeavour to forward my report early next week.—I am, &c., yours faithfully (signed), Thomas Weekley." This favourable opinion is no doubt what Mr. John Reid, our local director in Coolgardie, referred to in his cable to us of December 23, which we immediately communicated to the Press, and which was to the effect that Mr. Weekley's reports on the Royal Group and on the St. Albans were both very favourable. By Monday's mail Mr. Reid, writing from Coolgardie under date December 18, says:—"Mr. Weekley is on the ground, and you will see by the letter enclosed he is giving matters every attention. You will have Mr. Weekley's report by the next mail. At present I know that he is very pleased with his management, and has a good opinion of both mines." Mr. Reid also writes that he had accepted Messrs. Thompson & Co.'s (of Castlemaine) tender for complete winding equipment for two main shafts, one at the St. Albans and the other at the Royal, and that the plant was to be shipped to Fremantle immediately. I do not know, gentlemen, that I have anything more that I can tell you, but as items of general information, and also of the greatest importance to the well-being of this company, I may add that the board have been favourably impressed with the prompt action of the Colonial Government in putting through the telegraphic line to Menzies. This was completed at the beginning of December, and in another company that I am associated with we actually received a message directed from Menzies on the 11th of that month. The railway line is also projected, and when completed should prove a most material advantage to us in the matter of freights. In the telegraphic summary given of Sir John Forrest's financial statement for the year 1895, we find that provision is made for the erection at Menzies of a tank to hold 3,000,000 gallons of water, at a cost of £4000. We are writing to our manager to send us the fullest information as to the location of this tank, and as to the source from which this expected water supply is to be obtained. (Applause.)

There being no questions, a vote of thanks to the Chairman, cordially given on the motion of Mr. JOHN REID, and suitably acknowledged, terminated the proceedings.

DORIC GOLD MINES, LIMITED.

The statutory meeting of the Doric Gold Mines (Limited) was held on Thursday, at Winchester House, Mr. WALTER GRITTEN presiding.

The SECRETARY (Mr. John Perkins, LL.D) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—As you are all aware, this is a meeting held in compliance with the Companies Acts, which must take place within four months after the registration of a public company, the object being, principally, to permit of our knowing each other. On these occasions there is generally not much to say. Our existence has been very short, but after you have heard what is to be said, I feel sure you will agree with me that we can heartily congratulate ourselves. I think it will be best if I start by giving you a short description of our mines. The Doric Gold Mines consist of a group of mines situated on Saxon Mountain, Clear Creek, Colorado, and are within the town limits of Georgetown, and within 200 yards of the Colorado Central Railway, thus affording unusual facilities for transportation. These mines are in the gold belt which commences with the Pulaski running, and opened by the Burrell Gold Company and Centennial, all dividend-paying mines, and thence to the Cosmos on Saxon Mountain. These lodes have yielded the richest ore in the State of Colorado. The Doric group embraces the Americ, Britannic, Celtic, Germanic, Doric, Electric, and Ionic, all contiguous veins. Each claim is 1500 feet long by 150 feet wide, and is held in accordance with the usual United States mining laws and customs, and entirely free from adverse and conflicting influences. Four tunnels have already been driven distances of from 75 feet to 125 feet. As a rule, when a gold mining company is established it has to do endless development work, and, in most instances, only after long and patient waiting can the shareholders expect any return. In our case, I am happy to say that such a state of things does not exist. We took over this property after a large amount of development work had been done, and we have so far advanced

with two tunnels, that we at any moment may expect to strike the various lodes—some eight that we have already located—when we have every confidence we shall at once be in a dividend-paying state, as all we have to do then is to send the ore extracted down to the smelting establishment at Denver, and receive our money, which will at once be available for distribution amongst us. Our managing director, Mr. Swanton, has just returned from the mines, and he will now tell you what his opinion of the property is. Any questions you may be pleased to ask after this I shall be happy to answer.

Mr. W. E. SWANTON, the managing director, said: Mr. Chairman, Ladies, and Gentlemen—As the Chairman has informed you, I have just returned from our mines at Georgetown, Colorado. The whole of our eight claims are located up the side of Saxon Mountain, which rises 3000 feet above the town. The lode or vein is clearly defined by strong outcrops on each claim, so that we have eight strong veins appearing on the surface, which all mining men know is not often the case. We intend to locate two more claims on veins which intersect our property, almost immediately. The development work which has been done on the property clearly demonstrates the existence of the veins underground. In fact, we could now take ore out of the various adits, but it would have to be packed down the steep mountain side at great expense. We are, therefore, driving the Cosmos tunnel, which is a crosscut, to intersect all the veins at the level of the road; this is by far the most economical plan upon which to work such a property as ours. When the crosscut has been driven 740 feet we shall be working at about 12 points at one time on road level, and taking ore from every one. We can then raise up and drift again, and also stop in all the drifts. It will then only be a matter of how many men are employed as to the quantity of ore we will take out. We will take, for instance, the Americ lode, which will be the first we expect to come to in the Cosmos tunnel. We shall be able to drift 1240 feet east, and we shall then have a back of 1070 feet—that is to say, 1070 feet from tunnel to surface. Supposing the lode to be only a foot wide—in all probability it will be 2 feet or more—with 10 cubic feet of ore to the ton, allowing for the angle of the mountain, this will give 80,000 tons of ore in the one lode alone, taking a very low estimate. Now we have eight of these lodes, and intend to have 10, which will give you a rough idea of what immense possibilities are before us. Besides this, we can sink 500 or 1000 feet below the Cosmos tunnel level on each vein also. Our property is therefore almost unlimited. The Britannic lode is a contact lode between porphyry and granite—a combination that is considered excellent for richness and quantity of ore. As to the management of the property, I may say that we can congratulate ourselves upon having such a man as Mr. W. J. Lewis as manager. You have probably all heard of the wonderful new gold camp in Colorado, called Cripple Creek. I had occasion to visit Cripple Creek, and while there saw all there was to be seen, but wonderful as many of the mines at Cripple Creek are, I did not see one that I would prefer to our own, taking all the circumstances into consideration, and having regard to the enormous developments awaiting us. Of course, mines such as the Portland, with a capital of £3,000,000, in £1 shares, the price of which is, I believe, £2.05, paying monthly a dividend of 2c. per share, and the Independence, owned by Mr. Stratton, where he has \$2,000,000 of ore blocked out and in sight, do not come into this comparison, but when we have worked three years, as they have, I believe we shall have even a greater mine than either of these, without the great outlay of capital which has been necessary in their case. (Applause.) The Centennial Mine at Georgetown, which is in the same belt as the Doric, has been paying for years, their ore averaging 2 ounces to 3 ounces gold and \$50 silver per ton, and 1 to 2 per cent. copper, upon all of which metals the smelters pay. With improved machinery, they could take out 50 tons of this ore per day, so what are we likely to do in a tunnel, where no machinery is necessary? If we should find it necessary at any time to put on bore drills, we have water there, which, with the construction of a dam, would be sufficient to drive an air compressor and all the drills we should require, besides fans or anything of that sort, for ventilating the mine. At the present time, however, we have very good air in the mine. I do not think I can say anything further, but I may tell you, in conclusion, that, from what I have seen of the mine, I thoroughly believe in it. (Applause.)

Some photographs illustrative of the property were then handed round among the shareholders.

Mr. REDMAN: I do not think that I have any question to ask, because the statement made by Mr. Swanton appears to me highly satisfactory. I rise for the purpose of asking you to kindly call upon a shareholder present who has taken the trouble to go out to the mine, in order to see for himself how things were going on. He has also gone to the expense of having an assay made by one of our first London houses. I think it would be of very great interest to the shareholders to hear the result, and I am quite sure it would add very much to the value of our property in the public estimation. The gentleman I refer to is Mr. Saqui. (Applause.)

Mr. HORATIO SAQUI: I have been called upon to give my opinion as to the property in which we are all interested, but first it would perhaps be necessary to tell you how it was that I came to visit the mine. Hearing about the Doric Gold Mines as a likely investment, and being told that Mr. W. E. Swanton was connected with it, knowing him intimately, and also having great confidence in regard to his knowledge of mining, I purchased a number of shares. Later on, hearing that good information had been received, I increased my holding. Naturally, being interested, I watched the newspapers for information with regard to the Doric Mine, and I saw reports which were good, and latterly cables, which, to my mind, were so extraordinary, that I began to have serious doubts as to whether it could possibly be so. I had heard before of such things being adopted for the purpose of "rigging" shares, and I thought if it was so in this instance, that if I had one share in the mine, it was one too many, while if half of it was true, many as I had, they were not half enough. I questioned some of my friends what they thought of these reports, and the prospects of the mine. They all believed the reports to be true, on account of the source from which the cables came. On thinking the matter over I decided, as I had business there, to take the opportunity of visiting the mine, and with that object in view, I called on the directors of the company, and asked for a letter of introduction to the manager, to give me every facility in his power to inspect the property. This the directors readily did, and I went and stayed a week there. I visited the mine every day, and I was well satisfied that the property was in good and practical hands, and that the work was being energetically and economically pushed forward. My opinion is that the mountain is one mass of mineral. I found no less than eight distinct lodes outcropping on it, and two tunnels were being driven in at the base, to cut these lodes, as I was told, at great depth. I also visited other mines in the neighbourhood, all of which appeared to be privately owned, and the information I got from various independent miners in the neighbourhood with regard to the value of our property was that, rich as the district is, the particular part in which we are interested was the best, as the particular

lodes they were working all appeared to centre in the Saxon Mountain. Another great factor in the economical working of the Doric mine was that no machinery of any kind was required for hauling or pumping, and the tunnels being driven in at the base of the mountain, the ore is taken out easily to the railway, which passes close to the mouth of the tunnel. This is a great factor in lessening the expenses. I felt satisfied in my opinion that the shares of the Doric Mine were a good investment, and likely to pay a good dividend in the near future. On the morning of the day I left the district, I saw Mr. Lewis, the manager, and told him that I desired to take some of the quartz from one of the reefs, and he asked me to select any part. I did so, and we called two men from the bottom of the tunnel, and went to the reef in question, where a short tunnel has been driven for 15 feet. They inserted cartridges and lit the fuse, and then retire. After the explosion I re-entered the tunnel, and asked Mr. Lewis to pick out some of the quartz and put it in a sack. This Mr. Lewis refused to do, saying that as it was done at my request, the least I could do was to pick it out myself. I did this indiscriminately, and tied and sealed the sack. Immediately on my arrival here I sent it to Messrs. Johnson, Matthey and Co., and the result was that it fully confirmed all the reports I had heard about the mine before I went out to see it. The result conclusively proves that if ours is not the richest mine in the world, it is at least one of the richest. The certificate we have is as follows:—"We have assayed the sample of mineral, and find the following result: One bag, sealed, 28 lbs., produce of copper 2.90 per cent.; produce of gold 12 ounces 4 dwts.; silver 11 ounces 18 dwts. per ton." (Applause.) I have now much pleasure in handing this certificate to the Chairman.

A SHAREHOLDER: I beg to propose a vote of thanks to Mr. Saqui for the interest he has taken in this matter. (Applause.)

Mr. SAQUI: It is very kind of you, but the interest I took was entirely in my own behalf. I was interested in the property, and thought that if it was as good as was stated, I would like to find it out. I have been, I have seen, and I think I have conquered. (Laughter.)

Mr. REDMAN: I think there is a very substantial way in which this meeting of shareholders may show their appreciation of Mr. Saqui's services. No doubt the journey was in a great measure taken for his own advantage, as he is a large shareholder, but we also individually and collectively profit by the experience he has gained and the information he has made public, because I take it that it will make our interest in the mine of very much greater value. I think, therefore, we might very properly show our appreciation of Mr. Saqui's business tact by recommending to the board, as the number of directors is, I believe, only three, that Mr. Saqui's name be added to the list. (Applause.) He is a practical and successful business man, and as he has shown his personal interest in the mine in a very practical manner, I think we should be doing a graceful act if we were to recommend him to the Chairman and directors as a fit and proper person to be added to the board. (Applause.)

Mr. SMITH: I have much pleasure in seconding that. It was only through the interest Mr. Saqui took in the company that I became a shareholder.

Mr. W. T. POTTS: I would support that, for I think we owe a deep debt of gratitude to Mr. Saqui for the great interest he has taken in the mine.

The CHAIRMAN: We will take steps to consider the suggestion at the next meeting.

A SHAREHOLDER: Did Mr. Saqui go at his own cost or at the cost of the company? If at his own cost, I think it would be well to meet his expenses, and I would suggest that some honourarium should be given. (Hear, hear.)

The CHAIRMAN: We will consider that point later on.

A SHAREHOLDER: Have you any idea as to when the lode is likely to be struck?

Mr. SWANTON: It is difficult to tell when the lode will be struck. We are in hopes of reaching it any time, and at any day. It is well known to mining men that the dip of the lode may change, but we expect and hope to strike it at any moment. In fact, so far as I know, it may be struck to-morrow. I do not see how we can go another 100 feet without meeting our first lode, but it is a difficult matter to calculate what direction the lode will take underground.

On the motion of Mr. SAQUI, a vote of thanks was given to the Chairman and directors, and with the brief acknowledgment of the compliment from the CHAIRMAN, the proceedings terminated.

THE STRAY SHOT AND EXCELSIOR GOLD MINES, LIMITED.

Lord CLANMORRIS presided at the statutory meeting of the Stray Shot and Excelsior Gold Mines (Limited), held at the offices of the company, 70, Cornhill, on Thursday, the other directors present being Mr. B. C. Hargreaves and Mr. J. Kenneth Mackenzie.

The CHAIRMAN said the shareholders would remember that the company was formed in September last to acquire a working and developed property, consisting of 10 acres at Marble Bar, in the Pilbara district of Western Australia. Within 21 days of the formation of the company the property was transferred, but, unfortunately, immediately after they took possession a strike of miners occurred at Marble Bar, and operations were delayed for nearly three months. He was, however, glad to inform them that the mine was now in full work in three shifts, and the directors hoped at no distant date to be able to declare a dividend on the capital subscribed. On the 1st inst. the directors received from the manager of the mine a cable in the following terms:—"Crushed 100 tons quartz and surfacing, producing 190 ounces of gold." This was not up to the average shown previous to the company taking over the mine, but the falling off was due to the fact that the surfacing as well as the quartz had been put through the battery. The managers advised that this was necessary, because, unless they worked the surface themselves, others might come on the property and work it. On the 4th inst. the directors received the following cable:—"Important development, Augusta Boundary." This, they believed, referred to the striking of the reef that ran through the adjoining mine—the Augusta. The Augusta Company were reported to be working into the property of this company, and consequently they sunk a shaft at the edge in order to stop them, and apparently it had turned out very well. The manager had advised the board to adjourn the present meeting for a fortnight, because he expected to be able to report "something good," but, as the directors were in the habit of making all the reports they received public, it was not considered necessary to put off the meeting.

In reply to a SHAREHOLDER, the CHAIRMAN said the whole of the shares offered for sale were taken up, and the property was paid for within a few days of the closing of the lists—£12,000 in cash and £53,000 in shares. He believed it was a very good mine.

In reply to another SHAREHOLDER, Lord CLANMORRIS said the company had no difficulties in regard to water, and they had plenty of timber.

A vote of thanks was accorded to the CHAIRMAN, who, in

reply, said he hope next time he met the shareholders he would have something very satisfactory to tell them.

PHOENIX, LIMITED.

The first ordinary general meeting of the members of Phoenix (Limited) was held on Thursday, at the Cannon-street Hotel, Mr. J. T. Hopwood, D.L., J.P., in the chair.

The SECRETARY (Mr. W. P. Owen) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—As you are aware, this is our statutory meeting, in order to comply with the Companies Acts. It is not very usual to say much at these statutory meetings, because, as a rule, when a company has been formed and but three months has elapsed, there is not much prospect of showing any definite results. But in our case, being a reconstructed company, perhaps, for the benefit of the shareholders who may have joined since it was reconstructed, it might be useful to call attention to a few points in our more recent history. In the first place, I ought to apologise for the small number of directors present to-day. We have just received a telegram from one that he is exceedingly unwell, another is far away in the North, and the third—Mr. Egerton—is in South Africa, and, I hope, attending to your business there. You will remember that in September last the company was reconstructed by your unanimous wish. The capital of the company is £200,000, divided into 400,000 shares of the value of 10s. each, on 300,000 of which 7s. 6d. was credited, leaving a balance of 2s. 6d. to be provided. Sixpence per share has already been called up, and nearly all of it paid, and we are left with an uncalled capital of £30,000, which is a very fair thing for a company to have in these days, and your directors will do their utmost to make the best possible use of it. In addition to this, we have a reserve of 100,000 shares, equal to £50,000, which are not yet taken up, and which are held in reserve. These we propose to deal with if opportunities offer, by arranging for certain plots of land in such a way as may be deemed best for the company's interests. First of all, I will deal with the prospects of the company at the present moment. You are aware that what we are hoping may turn out one of our best schemes is the working of the Tipperary Gold Mine. We have a half interest in this, and for a considerable time we have been driving what is called a low level adit. [The Chairman then explained by means of a sketch the process of driving a low level adit.] From the high level adit which was driven some time ago we cut the reef, and from it was taken about £53,000 worth of gold. We expected by driving a little further to come across another reef, but the ground proved to be very much disturbed, and we thought it was useless to go on with it, and we were strongly advised by most eminent experts in the country to cut a low level adit, and this we have already done about 200 feet below the high level adit. At the time I had the honour of addressing you in September we had driven the adit between 1700 and 1800 feet, and had the reef been vertical, as we hoped it might have been, we should have struck it then. We telegraphed a few days ago for the very latest news, and the reply states that we have now driven 1900 feet, and it all depends upon the dip of the reef when we shall strike it. We are now expecting almost every day to hear that the reef has been struck. When we do strike it a 10-stamp mill is quite ready, with rails laid down to the mouth of the adit, and within a few days of striking the reef and getting out the ore we can commence to crush it. That is chiefly the position with regard to the Tipperary property. Then we have also the Argentine Concessions, in which we hold 50,000 shares, or one-fifth of the whole capital. We have been informed by Mr. Dering that he is almost ready to commence crushing, and he stated in his last report that he hoped to commence crushing at the end of this month. We are very near that now, and we think something will accrue from that. With regard to Western Australian, everyone has an eye in that direction, and I should not be at all surprised if during the present year there is a greater boom in that colony than has as yet been known. We have secured the services of a very eminent engineer, and we are joined with a strong financial company in sending him out to take up and investigate properties. We shall have a joint interest with that company, and if anything good is found there he will immediately let us know, and we are expecting to hear from him almost daily. He had been in the neighbourhood of Coolgardie now for about two months, and we have heard from him once or twice. I trust his efforts will be crowned with success very shortly, and that we shall have some news to tell you that may be interesting. As I have told you, Mr. Egerton is now in South Africa. He left England about one month ago, and he is to see there a very eminent engineer, who is a brother of one of our directors. We trust that he may have excellent news for us in a very short time. We have kept our eyes open both in Western Australia and in South Africa, and within the last two or three weeks we have had very promising property offered to us, but we were a little afraid then of what was going on in Johannesburg, and were rather chary of entering into it. I believe myself that it is not a bad thing, and I am trusting that we shall get fuller and further information about it. If you entrust us with this large sum of money I can assure you that we shall work hard in your service, and I hope that the results we may obtain will satisfy your most sanguine anticipations. (Hear, hear.)

A SHAREHOLDER enquired when it was proposed to make another call.

The CHAIRMAN, in reply, said that the board had not thought of such a thing yet. (Hear, hear.) They had plenty of money in hand as yet. If the board found something that was very gratifying to them in Western Australia, they might have to ask for money in order to take the property up, but it was impossible to say at that moment what calls would have to be made. He trusted that if they did make a call the directors would be amply justified in doing so, and that the shareholders would accede to it. At present, however, there was no idea of an immediate call.

Mr. TAYLOR said it might be pointed out to the shareholders that Mr. Tatton Egerton had not gone to South Africa at the expense of the company, but on his own account. It was, however, considered advisable by the directors that while he was there it might be expedient for him to see an engineer of eminence and repute there, and ascertain from him if anything existed in Mashonaland or Matabeleland which the company might obtain without the expenditure of much money, and an advantage to the shareholders of this company. The engineer representing the company in Western Australia was selected a few months since, after very careful consideration, on the recommendation of Messrs. John Taylor and Sons, and I think in a short period something may arise from his researches which may materially add to our prospects, and put us in the position of participating in the probable Western Australian boom of 1896. Though there was no prospect of an immediate call being made, he thought they would all cheerfully respond when such a call was made, because it would mean that the directors had something in view which would tend to increase the value of the company's holding, and thus raise the value of the shares. He considered that with the means they pos-

essed they stood as good a chance as any company in London with the same means of making a very good name for their shareholders before the year was out.

Mr. VEARS said he was certain that the directors would do the best they could for the shareholders, and he had no doubt there was a good chance for the company with reference to the prospects in Western Australia.

The CHAIRMAN, speaking in answer to questions, said that in the report which had been sent out to the shareholders, it was stated that Mr. Dering had from £7000 to £8000 worth of gold in sight, and as the capital of the company was only £25,000 that appeared to be a very fair show. That amount was available for crushing. The Argentine Concessions, however, to which he was alluding, was a company quite distinct from the Phoenix, and the latter company only held shares in it. This report was made three months ago and the quantity of ore ready now should exceed that amount. If the directors heard anything of interest from the mine, it should be immediately published, and, if necessary, the shareholders would be called together. The latest telegram they had received about the Tipperary property was:—"The hardness of the rock retards progress; the low level tunnel is now driven nearly 1900 feet; expect to strike the vein shortly." Then the Government engineer, Mr. H. A. Gurdon, says:—"The adit is 5 feet wide, and 7 feet high in the clear inside; it is perfectly straight, and to all appearance it has a uniform grade. Indeed, it is one of the best constructed adit levels that one will see in inspecting the whole of the mines in the colony, and Mr. Stanford deserves credit for the capable manner in which the work of construction has been carried out."

A vote of thanks to the Chairman and directors terminated the proceedings.

DUNDERBERG GOLD MINES, LIMITED.

The first ordinary general meeting of this company was held at the offices, 8, Drapers' Gardens, on Monday last, Mr. S. JENNINGS (Chairman of the company) presiding.

The SECRETARY (Mr. E. H. Young) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This is our first general meeting, and I am glad to say that although the period between the formation of the company and the close of the year has been so short, not a little has been accomplished to increase the value of our property. Our first care was to select a duly qualified manager, and it was with much satisfaction that we found such a manager in Mr. Kermeneen, a gentleman of considerable experience in practical mining, who has long been acquainted with the property, and has thorough confidence in its value, and is quite prepared to render good evidence of his belief. Mr. Kermeneen took charge at the beginning of November. His first report reached us at the close of that month. He found everything in good order. The levels had been extended, and a further run of rich ore had been exposed. His first care was to erect the necessary buildings to enable work to be continuous through the winter, and to lay in a supply of timber, stores, and material, so that everything required should be delivered before the snow rendered transport difficult. All this has been successfully completed, so that there will be no interruption in the work of further development. He has also taken steps to secure for us a grant of 80 acres of timber land about $\frac{1}{2}$ mile from the mine. This is important to us, as it was the last available, all the rest having already been taken up. As regards the mine itself, you are aware that it is approached by a tunnel some 500 feet in length. Where this tunnel strikes the lode at right angles levels have been driven right and left along the course of the lode exposing large bodies of pay ore. A shaft had been commenced on the surface, and an upraise from the tunnel level to meet it, the intervening distance being about 100 feet. This is the first underground work to be completed in order to improve the ventilation and facilitate the continuance of the shaft below the tunnel level, thus opening out further reserves of ore. This Mr. Kermeneen expects to complete within two months, and he says that it will double the value of the property. If we understand him correctly, it means that as soon as the mill is ready to work there will be ore ready equal in value to the whole capital of the company. Mr. Kermeneen is arranging for the purchase of a suitable mill, but it will be impossible to get it on the ground till the winter is over, and then he will have three separate points of ore supply—at each end of the level and in the shaft. He concludes by saying:—"Everything looks bright, and unless all indications fail, we will make a grand success." Let me sum up the main characteristics of this property in which we are all interested:—1. It is taken over as an already developed mine with plenty of pay ore in reserve ready for the mill as soon as it is erected.—2. The ore contains sufficient free gold to afford a profit without counting the value of the sulphurates which require different treatment. But it is from these concentrates that we expect to derive the largest profits.—3. We have an ample supply of water available for driving power. I need scarcely point out what a great advantage this is in reducing the cost of working with proper appliances. I have already mentioned that we have an ample supply of timber.—4. We have possession of an area of mineral property much in excess of the requirements of a single mine, and in all probability may, in course of time, be in a position to form two or more sub-companies to acquire and develop the other reefs intersecting this group. Lastly, the terms on which we acquire the property are unusually favourable. We have already paid for and absolutely possess a fourth interest in the whole property, whilst we have entire control with full profits for two years. The balance of the purchase consideration will not become due till the autumn of 1897, and no royalties to pay. The title to the whole property will then be legally transferred. We can, of course, secure this title at any previous time on making the cash payment, but we do not see any advantage in so doing until we have satisfactorily demonstrated the value of what we propose to acquire. We are assured that a few months' work will provide for this payment, and a satisfactory dividend besides.

A hearty vote of thanks to the Chairman terminated the proceedings.

PADDINGTON CONSOLS, LIMITED.

The first ordinary general meeting of the shareholders of Paddington Consols (Limited) was held on Thursday, at Winchester House, under the presidency of Mr. SINCLAIR MACLEAY (the Chairman of the company).

The SECRETARY (Mr. Charles Lloyd) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, I am sorry that you appear to be so much inconvenienced. We hardly expected so many to attend the statutory meeting, and I hope you will excuse our shortcomings in this respect, as I am afraid we cannot get a larger hall in this building just now. Gentlemen—The early date on which the meeting has to be held compels me to say that the Act does not enable me to give you very extensive news concerning your property. Such as we have received, however, is eminently satisfactory, and I propose briefly to state the facts to

you. This company was registered on September 26 of last year; the subscription list was opened on October 1, and the allotment made on October 4. The issue was a phenomenal success, there being applications for over 938,000 shares, representing nearly one million of money. The allotment was made strictly pro rata to 4301 applicants, every applicant receiving an allotment, and no larger allotment than 500 shares being made. (Applause.) Although we have only been at work a short time the development of our property has been proceeded with as rapidly as possible. Our property, as you know, consists of seven leases, comprising an area of about 80 acres, situated in the Broad Arrow district of the Hannan's Gold Fields. The work of development has been chiefly confined to the Paddington, Try It, Iolanthe, and Reisons Leases.—Paddington. Our latest reports say that the main shaft has been sunk 60 feet, on the Try It 123 feet, on the Iolanthe 45 feet, and on Reisons' Reward 230 feet. The reports from all these are most encouraging, good quartz being found at the bottom of these shafts, and the manager seems highly pleased with the development during the short time that we have been at work. The Paddington lease, however, has the honour so far, for on December 9 a cable was received from Mr. Charles Kaufmann, our consulting engineer, that at a depth of 60 feet the reef was 5 feet wide and very rich in gold, and that he was shipping a box of samples from the bottom of the mine which we expect shortly to receive. I think, gentlemen, considering the short time that we have been at work you will consider this news very satisfactory. In addition, it is very satisfactory to learn that the district in general is rapidly proving its richness by the frequent valuable discoveries which have so recently occurred on adjoining properties. On the water question I am happy to say I can speak with equal confidence, as from the shaft on the Try It lease a very large volume of water has to be pumped daily, so much so that it has been found necessary to make a better arrangement to cope with the water.

In respect of machinery, pumping and hoisting machinery have been erected, and the board are now making arrangements to order a 20 head battery. As to the management, you are doubtless aware that we have, with the consent of the West Australian Exploring and Finance Corporation (Limited), appointed Mr. Charles Kaufman, our consulting engineer, and the fact that we have such an eminent mining authority to look after our interests relieves us of all anxiety as to the proper management of our affairs in West Australia. Mr. Kaufman has appointed Mr. J. C. Dwyer as our local manager, and we feel confident that he has made a good selection. We have also sent out to the mine a competent book-keeper to take charge of our books, and, therefore, gentlemen, to conclude, we think that, with a good property, sufficient water, good management, and £50,000 cash working capital, there is more than a reasonable chance of making this undertaking a very great success.

After a brief discussion, the proceedings terminated with a vote of thanks to the Chairman.

ARGENTELLA MINES (LIMITED).

(IN LIQUIDATION).

A general meeting of shareholders in this company was held at Winchester House yesterday, for the purpose of receiving the liquidator's report, and passing any resolutions that might arise thereon.—Mr. E. W. Blandford (the liquidator), who presided, said that the meeting had been called pursuant to notice, and was compelled by law. Up to the present time he had collected, as liquidator, the sum of £50 7s. 6d. on account of arrear of call, the amount outstanding as due for arrears on balance-sheet of October 31, 1894, being £1373 1s. 10d. According to that balance-sheet the amount of sundry creditors stood at £3677 2s. 11d., while since that date another liability had been incurred. Under the circumstances, it did not look as if there would be much for the liquidator's remuneration, to say nothing of the creditors and shareholders.—A vote of thanks to the liquidator for presiding terminated the proceedings.

SOUTH FRANCES.

A meeting of adventurers in South Frances was held on Monday in Cornwall, Mr. A. Lanyon in the chair. The statement of accounts showed the loss on the six months' working had been £2492, and the balance against the adventurers was £2370. The accounts were adopted, Mr. S. Waterhouse alone protesting on the ground that from October 1 the properties should be worked as a joint concern, profits and losses being shared equally. A call of 10s. a share was agreed to.—The Chairman, replying to a question, said there had been nothing settled in relation to the question of land damage. On Tuesday Mr. Daubuz and he went to the Tehidy office and saw Mr. Goddard. He regretted to say the interview was not of a pleasant character. Mr. Goddard also felt strongly, and before leaving he spoke so strongly to Mr. Daubuz that he (Mr. Lanyon) felt bound, as one of South Frances' committee, on behalf of South Frances shareholders, to say that he could not, and would not, allow Mr. Goddard to make such remarks and imputations to Mr. Daubuz. Mr. Goddard said he should take proceedings to enforce his claim, and previous to this unpleasant feeling arising he (Mr. Lanyon) said that he had seen Mr. Bolitho and others, and to prevent this thing being kept open, if Mr. Goddard would recommend Mr. Bassett to accept the sum of £500, while some of the larger shareholders felt aggrieved that they should recognise 500s., they would do their best to secure that amount. Mr. Goddard emphatically refused to entertain it, and he told him that so far as he was concerned he would never offer him 500s. That was the position to-day.—Votes of thanks to the Chairman and the committee concluded the proceedings.

GOLCONDA GOLD MINES (LIMITED).

The second ordinary general meeting of this company was held on Monday, at Winchester House.—Mr. B. J. Price, M.P., who presided, said: It might appear to them that there was rather a heavy debit to profit and loss account, but it must be borne in mind that the expenditure extended over 16 $\frac{1}{2}$ months, while the results of only two crushings were shown on the credit side, so that this item was apparent rather than real. Had the account been made up to the close of the year instead of to September 30, the aspect of affairs would have been very different, for they had now the results of five crushings, and these had considerably more than covered expenses, besides allowing a considerable sum for development. It was satisfactory to know that the mine in which they proposed to put more capital had for some months been more than paying its way. They had written off 20 per cent. for depreciation all round, as well as the whole of the preliminary expenses. He moved the adoption of the report, which was seconded by Mr. B. Seimert, and carried.—An extraordinary general meeting was then held for the purpose of passing resolutions for the voluntary winding-up and reconstruction of the company.—Mr. Price, M.P., who again presided, said he did not want to pull the company, but to take a business-like view of their property and its possibilities. They had all been told, upon authority in which they had confidence, that all that was required to put their mine in a good state of development was a certain sum of money. The Chairman concluded by moving resolutions for reconstruction, which were seconded and carried unanimously.

GLEESONS' SUCCESS GOLD MINES, LIMITED.

The first ordinary general meeting of this company was held on January 14, in the Waterloo Rooms, Glasgow, Mr. D. N. SHAW presiding.

The CHAIRMAN said the company had been incorporated to acquire a gold mining lease of 12 acres, known as the "Gleesons' Success," in Western Australia, and the capital consists of £65,000, in £1 shares, of which £45,000 was payable to the vendors, and £20,000 was reserved for working capital. The prospectus was issued to the public in September, by which it was declared that the cash requirements of the company were £20,000, and on which sum the directors would go to allotment. The response from the public was of a most satisfactory nature, 33,945 shares having been applied for by *bona fide* subscribers, and the directors allotted 33,645 shares, the difference being made up of applications under 10 shares each, which the directors did not allot. On the allotment being completed the directors immediately adopted the provisional contract mentioned in the prospectus, and took steps to have the property transferred. They appointed Mr. Leslie A. Norman, M.A.I.M.E., as their representative in Coolgardie, as well as a firm of solicitors in Perth, West Australia, who on November 10 cabled that the property had been duly registered in the name of the company, and since then the official title to the property had been received, and which he now laid on the table for the inspection of the shareholders. Immediately on the transfer of the property developments were commenced on the mine, and the latest report from the manager, dated December 10, 1895, showed that the main shaft has now been sunk to a depth of 82 feet, and further, that the necessary winding and pumping plant had been placed on order with the manufacturer. Mr. Shaw then referred to an important matter that had occurred during the developments of the mine, and read a cable and extract of report from the manager, wherein it was stated that the developments had disclosed that the trend of the rich reef running through the property was to the south, and from all appearances ran into and through the adjoining South Block, and recommended immediate purchase of the South Block before the owners were made aware of the discovery, which the directors carried out at a cost of £2000. This additional block exactly doubled the area of the company's property, and which was believed to be a valuable acquisition. The company had an option of acquiring a 10 stamp mill in the United Mines Ore Reduction Company's Union at Coolgardie, and explained at length the great advantages accruing to the company from this acquisition. The directors had taken advantage of the option and secured the 10 stamp mill, which was expected to be ready for crushing long before they had ore from the mines to crush—a most unusual circumstance in connection with gold mining. Further, the company having their ore crushed at this Union's mill obviated all difficulty as regards water, which was an important item with mines in Western Australia. Moreover, it transpired, when the manager at the Union Mills was excavating for foundations for the boilers and engines, he came upon a gold reef 5 feet wide, and which was turning out valuable, and he immediately pegged out the lease as a gold mine, the ground previously only being held as a machinery site. The area of the ground was 12 acres, therefore the Gleesons' Success having at present a quarter interest in the Union became a quarter owner of this discovery, which altogether augured well for the company. The state-

ment of expenditure to date was submitted, from which it appeared that £800 had been sent to the mines, of which only £500 had yet been accounted for as expended in developments, and £24 odd as the expenditure at the head office, together with £2500 that had been paid to the United Mines Ore Reduction Company for the 10 stamp mill in the Union.

On the motion of Colonel WALKER, seconded by Mr. HENRY, a hearty vote of thanks was accorded to the Chairman.

WHEAL BASSET.

Mr. F. Oats presided at a meeting of Wheal Bassett adventurers, held on Monday. The accounts showed a profit of £3707, which was set aside in the accounts for the redemption of land damage and special fund for machinery partly delivered and ordered. The committee, in their report, stated that under all heads the shareholders will receive from the new company fully 5000 shares, in addition to the 18,117 they are entitled to and specified in the agreement, *vide* circular, August 21 last, and this amount your committee hopes will be further increased by the month or two of working in this year, which must be on account of the old company, before the new company can take over. The accounts and report were adopted, the Chairman remarking that that side of the hill was holding its own fairly with the other side. Even their differences he hoped they were settling in a different spirit to what they were doing in some other places, and they compared very favourably with the unfortunate squabbles in other places.—Mr. H. Trembach moved a resolution approving of the amalgamation, and appointing Mr. Rendle the liquidator of the Wheal Bassett Company, to wind it up voluntarily.—Mr. J. G. Bone seconded, and it was carried.—The Chairman proposed the approval of the draft agreement between the Wheal Bassett Company and the Bassett Mines Company (Limited). Referring to the claim for land damage, which they had agreed to pay, the Chairman detailed the negotiations which had taken place, and expressed the opinion that Mr. Goddard had throughout acted in accordance with what he believed to be his rights and justice. He (Mr. Olds) was hoping Mr. Goddard would have taken £500 to settle, but when he looked at it all round, and he thought the arbitration might mean some hard swearing and some delay, he thought it better to pay the other £200. In doing that he said they thought the commutation of the amount at 30 years was excessive, and that they still hoped they would give them something back in some other way.—The motion was carried, and shortly afterwards the proceedings terminated.

LEECHDALE RHODESIAN DEVELOPMENT COMPANY (LIMITED).

The statutory meeting of this company was held on Thursday, at Winchester House, Captain J. H. Berkeley presiding.—The Chairman said that the company was registered on September 28 last, but it was not until January 7 that they obtained a legal transfer of the property, so that they had not had much time up to the present for development work. The company went to allotment on a public subscription of £35,000. Of that amount £20,000 had to be handed over under their agreement with the vendors, so that there remained £15,000 for working capital. In addition, there were £36,000 worth of shares still available for issue, so that they had available for working capital 50,000 shares, or one-third of the whole capital of the company. Their property, which consisted of 80 claims and some 6000 acres of land, was well situated. They had an ample water supply and plenty of timber, a labour supply of a fairly good and cheap character, and an excellent climate, so that they had every reason to congratulate themselves on their

property, which possessed all these natural advantages. In conclusion, he said that he and his colleagues would do their very utmost to get the best return they possibly could from the property.

THE KINSELLA GOLD MINES (LIMITED).

An extraordinary general meeting of the company was held on Monday.—Mr. John B. Ball, who presided, said that they had met to consider resolutions for the reconstruction of the company. When the company was brought out it was calculated that £20,000 of working capital would suffice for the erection of the necessary plant, and about one year's development of the mine, by which time it was anticipated that the 10 stamp mill would be at work and producing sufficient gold to meet all expenses. The mill, through delay in transport, did not start till November, and by reason of stoppages, it was only now that it was running well. They had, therefore, three months' expenses to meet beyond what they had calculated, while some of the capital had been expended in the purchase of additional ground and plant. The shareholders had not taken up the £20,000 of extra capital authorised in October last, and it was, therefore, necessary to reconstruct the company. By the scheme now recommended the liability of 5s. per share would provide a further working capital of £20,085, of which £16,068 would be called up, the balance of shares remaining in reserve, but would not be issued without the consent of the shareholders in general meeting. Out of the sum called up the loan of £5000 with interest would be repaid, leaving £11,000 of working capital for developing the mine and providing the necessary plant. The property had been favourably reported on by four independent engineers before it was acquired, and everything seemed to point to the fact that it was well worth saving.—Some discussion ensued, and eventually the resolutions for reconstruction were carried, the number for the resolution being 14,860 shares, and against it 1855 shares.

TANGYE'S MALLEABLE CASTINGS.—Tangye's (Limited) desire to call the attention of railway, canal, and telegraph contractors, carriage and wagon builders, agricultural machinists, boiler and machine tool makers, ship and boat builders, colliery, mining, and electrical engineers, and engineers generally, to the fact that they have a special department devoted to the production of malleable castings, which, being equipped with all the most modern appliances, and under the superintendence of experienced experts, enables them to turn out expeditiously large quantities of the very best quality castings at favourable prices. Special apparatus for testing and proving, designed and constructed at the Cornwall Works, is made use of, and the most careful scrutiny exercised in regard to every article manufactured. Tenders for castings of special design submitted on receipt of necessary particulars.

MESSRS. LINCOLNE and Co., of 65 and 67, North Wallace-street, Glasgow, inform us that they have received from the India Office a second order for their "Diyasud" non-conducting composition for use in the Government factories, and their Rangoon agents inform them that the Irrawaddy Flotilla Company are so well pleased with the trials they have been making that they have ordered 10 tons for immediate requirements, and are shipping 50 tons by sailing vessel for stock. Messrs. Lincolne and Co. have recently received large repeat orders from India, China, Japan, Siam, Australia, and South Africa. They are gratified to learn that steam users abroad are recognising the advantages offered by their composition, which is of great efficiency as a non-conductor, and a saving of two-thirds in cost of freight and packages.

The SUBSCRIPTION LIST will OPEN on MONDAY, January 27, and CLOSE on or before WEDNESDAY, January 29, at 10 a.m. for Town and Country. The Working Capital of £20,000 having been guaranteed, the Directors will proceed to Allotment upon the List being closed.

The Pentalta Exploration Company (Limited) invite Subscriptions for the Shares of the

VICTORIA REEF GOLD MINE, LIMITED.

(MOUNT JACKSON, WESTERN AUSTRALIA.)

Incorporated under the Companies Acts, 1862 to 1890.

Capital

Divided into 75,000 Ordinary Shares of £1 each, of which the Vendors take 40,000 in part payment of the purchase money.

PRESENT ISSUE

£75,000,

£235,000.

Payable:—2s. 6d. on Application, 2s. 6d. on Allotment, 5s. one month after Allotment, and the balance in Calls not exceeding 5s. per share, and with not less than 30 days' notice as and when required.

DIRECTORS.

JAMES BLACKWOOD, Esq., Chairman Champion Reef (Nannine, W. A.) Gold Mining Company, Limited (Messrs. Blackwood, Bryson, and Co.), 12, Great Tower Street, London, E.C.—CHAIRMAN.

HENRY J. HADRILL, Esq. (late of Messrs. Cockburn, Smithies, and Co., London and Oporto), Millfield, Chislehurst, Kent.

ADMIRAL LEICESTER C. KEPPEL, The Lodge, West Bergholt, Colchester.

ARTHUR MORIER LEE, Esq. (Messrs. Lee, Crerar, and Co.), 9, Fenchurch Avenue, London, E.C.

AGENTS IN AUSTRALIA.

Messrs. F. W. PRELL AND CO., Queen Street, Melbourne.

BANKERS.

NATIONAL PROVINCIAL BANK OF ENGLAND, Limited, 112, Bishopsgate Street, London, E.C., and its Branches.

BROKERS.

Messrs. R. B. SMITH AND CO., 10, Throgmorton Avenue, and Stock Exchange, London, E.C.

SOLICITORS.

Messrs. MORTEN CUTLER AND CO., 99, Newgate Street, London, E.C.

MINING MANAGER.

MR. D. CHAMBERS (Present Manager, Victoria Gold Mining Syndicate).

AUDITORS.

Messrs. CLARK, BATTAMS AND CO. (Chartered Accountants), 4, Brabant Court, Philpot Lane, London, E.C.

SECRETARY AND OFFICES.

MR. J. M. ROBERTSON, 72, BISHOPSGATE STREET WITHIN, LONDON, E.C.

This Company is formed for the purpose of acquiring Lease No. 214, situate about 10 miles west of Mount Jackson, in the Yilgarn Gold Fields, Western Australia, containing 17 acres or thereabouts, and known as "The Victoria Gold Mine."

The property was reported on for The Victorian Gold Mining Syndicate in 1894 by Messrs. D. Chambers and J. George, by Mr. C. H. Yeo, and by Mr. J. B. Filewood, and their reports in full are enclosed with the prospectus.

A more recent report being, however, required by the directors, one has been obtained from Mr. W. H. Nicholas, M.E. (manager of Fraser's Gold Mining Company), who inspected the mine in October last, and who reports as follows:—

"Southern Cross, Yilgarn, W.A., 16th October, 1895.

“P. W. Prell and Co., 31, Queen-street, Melbourne.

“Dear Sirs,

“In accordance with your instructions I have completed my inspection of the Victoria Mine at Mount Jackson, and beg to report thereon, and also to confirm my wire of even date, giving synopsis of same.

“The mine consists of 17 acres held under Gold Mining Lease No. 214, Mount Jackson, Yilgarn Gold Fields, and is about 100 miles from Southern Cross in a northerly direction.

“The country is highly favourable for the occurrence of quartz lodes, and consists of a diorite and mica-schist.

“The strike of the orebody is N. 15° W., and the underlay 35° east.

“The lode stuff has a most promising appearance, being beautifully laminated and regular. The country is soft and kindly, and I feel satisfied that the vein is a true fissure, and will exist to great depths. There are five shafts and cuts in the property on the lode.

“No. 1, near the northern boundary and adjoining The North Victoria Company, cuts the lode at 40 feet, and proved it to be 4 feet in width, the quartz of leafy character, with traces of pyrites, and is of a most promising description.

“A sample taken from bulk pile assayed by myself gave a return of 8 (eight) ounces, 12 (twelve) pennyweights, 8 (six) grains, which I consider a most satisfactory result.

“The ore is very friable, and easily treated, and bears every indication of its auriferous nature.

“No. 2 Shaft is now being sunk, and by indications is now approaching the lode.

“No. 3 Shaft, which may be described as the main shaft of the mine, is 6 feet by 4 in the clear, and has been sunk to a depth of 100 feet.

“The level has been driven 10 feet to the West, which cuts through the lode, proving it to be 9 feet in width from wall to wall. The stone here, sampled by myself, assayed 4 ounces 6 dwts. 2 grains.

“There are about 20 (twenty) tons of stone at grass, which will give about 4 ozs. (four ounces) to the ton.

“In conclusion, I may state, considering the natural advantages, timber and firewood being plentiful, that the property has most excellent prospects. The mine itself shows good stone, a good supply of water is assured, and I can with confidence recommend its purchase.

“I am, dear Sirs, yours faithfully,

“W. H. NICHOLAS, M.E., M.M.

“(School of Mines, Ballarat.)

“Fraser's Gold Mining Company, Southern Cross.”

In amplification of this report Mr. Nicholas cables on the 13th November as follows:—

“Southern Cross, 13th November.—Having well-defined walls the vein is a true fissure vein.—NICHOLAS.”

The Directors are informed by Messrs. F. W. Prell and Co. that a sample of the ore from the mine was sent in September, 1894, to Mr. H. Bernard H. Woodward, Assayer to the Government of Western Australia, and they have received a duplicate copy of his certificate, which is as follows:—

“From the Government Assayer to Chas. H. Yeo, Esq.

“I certify that the 4 lbs. 1 oz. auriferous quartz brought to me this morning, and said to be from Nicholson's Lease, Mount Jackson, contains gold at the rate of twenty-five (25) ounces 16 dwts. 3 grs. to the ton. The gold is free and mostly very fine.

“BERNARD H. WOODWARD.

“From the various reports it will be seen that there is not likely to be any trouble about water or timber, as the *Western Mail* of 15th June, 1895, reported that water was struck at a depth of 110 feet on the property. This has since been confirmed by cable from Messrs. F. W. Prell and Co.

Taking into consideration the fact that the work already done on the property has proved the size and value of the reef, and that there is a large body of stone available to supply a battery, coupled with a plentiful supply of water, the Directors have every confidence that with good management dividends should be earned within a short time after the erection of the machinery.

The Vendors—who are the promoters of the Company, and pay all expenses attending the flotation of the Company up to allotment—have fixed the price to be paid for the property at £55,000, payable as to £10,000 in cash, as to £45,000

in cash or shares, or partly in cash and partly in shares, at the option of the Directors and as to the balance of £40,000 in fully-paid shares, thus leaving 20,000 shares available for providing working capital.

For contracts see full Prospectus.

The statements in the prospectus are based upon the sources of information above referred to—namely, the original reports of Messrs. George and Chambers, Yeo, and Filewood, and upon the confirmatory report made by Mr. W. H. Nicholas. All these documents can be seen at the offices of the Solicitors, together with the draft agreement.

Applications for Shares should be made on the accompanying form, and forwarded to the Company's Bankers, together with a remittance for the amount payable on application.

Prospectuses and Forms of Application may be obtained from the Bankers, Solicitors, and Brokers, and at the Offices of the Company.

LONDON, January, 1895.

APPLICATION FORM.

This Form may be used.

THE VICTORIA REEF GOLD MINES, LIMITED.

Capital, £75,000, in 75,000 Shares of £1 each.

Issue of Shares of £1 each, £

To the Directors of

THE VICTORIA REEF GOLD MINE, LIMITED.

GENTLEMEN.—Having paid to the Company's Bankers the sum of £..... being Share, I hereby request you to allot me the same, and I hereby agree to accept the same, or any less amount allotted to me, upon the conditions of the Prospectus, and I agree to pay the instalments thereon as required in the terms of the Prospectus, and I authorise you to place my name on the Register in respect of such capital, and I declare that I waive any further compliance with Section 33 of the Companies Act, 1867, or otherwise, than that contained in such Prospectus. In the event of my receiving no allotment the amount to be returned in full.

Name (in full)

Description

Address

Date

If desirous of taking up in full on allotment, sign also here:—

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

ALBERT.—The following cable has been received from their managing director:—"Struck fresh water close to Uno and Prince Imperial. Both places looking well." The following cablegram has also been received from the consulting engineer in Coolgardie:—"Are now having heavy rains; 11 feet of water in the 25 mile dam.—Brakespear."

ANTIOQUIA (Frontino).—The following is the result for November, viz.:—175 tons produced 91 ounces of gold. Estimated value of the gold, £246; estimated total cost, £209 19s. 5d.; estimated profit, £36 0s. 7d.

ALBERT MINES.—Telegraphic advices state that the Golden Rica, adjoining Herbert Gold (Limited), is getting very good visible fine gold. The result of averagesamples is 3 ounces per ton.

BROKEN HILL PROPRIETARY.—Advices state that for the week ending the 16th inst. 6679 tons of ore were treated, yielding 449 tons of lead, containing 140,674 ounces silver, also 819 tons treated by amalgamating and leaching plants producing 9064 ounces silver.

COETZESTROOM ESTATE.—The latest information from the manager refers to very satisfactory assays from Thomas's Reef as follows:—Gold: Earthy matter 13 dwts. 2 grains, washed pebbles 4 dwts. 6 grains, quartz 7 dwts. 22 grains, quartz trace, earthy 1 ounce 4 dwts. 19 grains, ferruginous 2 ounces 11 dwts. 21 grains."

CENTRAL CHILI COPPER (Panucillo).—The directors have received from their manager at Panucillo, by cable:—"Result of work for month of December: Mines produced 1200 tons, ores bought 1150 tons, ores smelted 2700 tons, regulus produced 275 tons; net profit for the month £315."

CONSOLIDATED GOLD FIELDS OF SOUTH AFRICA.—On the 21st inst., the directors cabled to their friends in Johannesburg as follows:—"A report has been circulated to the effect that Simmer and Jack is closed down. Can we contradict the report? Consolidated Gold Field Fields of South Africa, Limited," to which they have received the following reply:—"Simmer and Jack report absolutely untrue." A further confirmation of the untruth of the report has been received by the Simmer and Jack Company.

DON PEDRO.—Produce, first half of January, 126 ounces from 200 tons.

FERREIRA.—A cablegram has been received from the head office at Johannesburg, advising that the next ordinary annual general meeting of the above-named company will be held at the offices of the company, Johannesburg, on Tuesday, March 3. Holders of share warrants to bearer, wishing to be represented at the above meeting, must deposit their share warrants at the places and within the times, following:—At the head office of the company in Johannesburg, at least 24 hours before the time appointed for holding the meeting. At the London office, 120, Bishopsgate-street Within, E.C., before February 3. c. At the Paris agency of the company, the Credit Lyonnais, Paris, before February 3.

FRONTINO AND BOLIVIA.—The statement for the month of November is as follows, viz.:—Estimated value of the gold and sulphurates, £7943 7s. 4d.; cost at the mines, Medellin, and in London, £6541 10s.; estimated profit, £1401 17s. 4d.

GREAT EASTERN COLLIERIES.—The output for last month was 12,500 tons. Profit, £1900.

KABOONGA.—The following cablegram has been received:—"Have met with wash dirt just below the top of Prospect level, dipping west, water-worn boulders. Prospects are decidedly encouraging. Gold shot like. Expect to begin washing within the next few days."

LADY FORREST (Murchison).—The manager cables under date of January 20:—"Lode well defined, prospects encouraging. Driven 148 feet on east lode and 70 feet on west lode 100 feet level. Average width of lode 3 feet 6 inches."

LYDENBURG MINING ESTATES.—New Clever Mine. Results for December:—From mill: Crushed 1845 tons, yielding 670 ounces of gold. From cyanide works: Treated 947 tons, yielding 711 ounces of gold. Total yield 1381 ounces. Total value of month's output, £3920.

LONE HAND.—Cable received from Mr. A. E. Ritchie, January 18:—"Have struck a rich ore body in the 60 feet level main shaft Lone Hand 4 feet in width. Do not intend to raise more than is absolutely necessary, as owing to extreme richness it will have to be bagged. The rains have been very heavy during the past week; our dams are now full of water."

LYDENBURG ESTATES.—The following cable, dated Johannesburg, January 19, has been received:—"The vein struck on Erasmushoop is 9 inches thick, and assays from 16 dwts. to 4 ounces per ton."

MAORI GOLD.—The following is a copy of cable received on Friday, the 17th inst., from Mr. C. J. McMahon, the managing director in Australia:—"Maori (Menzies.) Rich ore continuing; starting driving levels; raining."

MAY CONSOLIDATED.—The following cable message, dated Johannesburg, January 17, has been received at the office:—"The profit for the past month (December) was £6000."

MURCHISON NEW CHUM.—The following is a copy of cable received from the mine:—"Crosscutting 320 feet; making good progress; development of the mine."

NEW CHUM (Bendigo).—The manager advises by cable:—"The main shaft has been sunk to a depth of 561 feet, cutting spurs, showing gold; water very heavy. The 440 feet crosscut east driven 125 feet, cut spurs, showing payable gold."—Official Note. The directors judge from this cable that the spurs now being met with in the shaft are coming from the west leg of the saddle formation, the crest of which was cut in the 400 feet crosscut, and their carrying gold evidences the fact that such formation may reasonably be expected to prove highly auriferous, whilst the eastern crosscut at the 400 feet level shows that shortly battery stone will be at hand from three different points which, when opened up, should yield sufficient material to maintain regular crushings. Machinery working well, and all developments proceeding most satisfactorily."

NEW QUEEN.—The London offices have received the following cablegram, dated Charters Towers, January 18, giving result of crushing for past fortnight:—"101 tons crushed for one week, yielding 104 ounces gold. Have drawn on you for £1000. Shipped per a.s. Duke of Westminster 358 ounces. No change in shaft. Ten feet sunk during the fortnight."

ORIENT.—A letter has been received from the manager, dated Cairns, Queensland, December 5, states:—"We have struck a nice new reef in the excavations for the winding drums. It is a branch from the Orient, and more promising than the main lode. I am now driving on this, and the stone is better than any I have yet seen in the main lode. Will let you know

more about it in a week or two. I am commencing to be afraid that we won't be quite ready by Christmas, as we have a stone shoot to make at the battery, and to carry out the end of the tramway on tressels. Everything is looking very promising, and the work is making all possible progress."

OURO PRETO.—This company has received a cablegram, giving the December returns as follows:—"Passagem Mine, 3940 tons produced 1802 ounces.—Raposo Mine, 350 tons produced 50 ounces."

PAHANG CORPORATION.—The directors announce that the return published on the 11th inst. as that for the month of December, viz.:—83 tons 3 cwt. of black tin was in reality that for the month of November, the error being occasioned by an interruption of communication. The December returns, which are now to hand, are as follows:—"Jeram Lumpong mill. In 17 days of 24 hours each 735 tons of stone were crushed, producing 55 tons of black tin. 20 head of stamps running. Working costs, £10,750.—Jeram Batang mill. In 19 days of 24 hours each 620 tons of stone were crushed, producing 31 tons 7 cwt. of black tin. 20 head of stamps running. Working costs, £7000."

PIGG'S PEAK DEVELOPMENT.—When the directors decided to issue the circular, which was sent to the shareholders on the 6th instant, instructions were given that a cablegram should be sent to the mines enquiring for the latest news, but in consequence of the restrictions placed upon telegrams passing through the Transvaal the reply in cypher has come to hand, and is understood to mean as follows:—"Developments upon the Pigg's Peak lode very satisfactory; 120,000 tons low grade ore in sight. Nottingham mill shut down. Emelimo mill working day and night. Shall arrange to clean up the end of the month."

SIMMER AND JACK.—Last month's profit was £11,032. The board know nothing about any intention to shut down the mine. Intend to continue operations in the usual manner."

ST. JOHN DEL REY.—The following telegram has been received from Mr. Chalmers:—"Produced 11 days, first division January, 7500 cwtas, equal to 864,6260 ounces troy; value £2908 5s.; yield per ton, 3·5 cwtas (4034 ounce troy); except-

SOUTHERN NEW CHUM.—The mine manager cables:—"The main engine shaft has been sunk to a depth of 76 feet; country rock is slate with stringers of quartz."

SILVER KING.—Cable from manager at the mines:—"First half of January crushed 800 tons of ore; estimated production, 5500 ounces silver."

SELUKWE DEVELOPMENT.—Cablegram from the Tebukwe Mine:—"The main shaft is down 150 feet; the width of the reef is 3 feet. Two samples from this assayed 3½ ounces and 2 ounces per ton."

SPITZKOP FARM.—Produce of 10 stamp mill for December, 199 ounces from 643 tons. The manager advises that owing to bad weather he has not been able to work the mill full time.

SHEBA GOLD.—The following cablegram has been received from the general manager:—"Level No. 8 stopes looking splendid."

TRANSVAAL COAL TRUST.—The following cablegram was received on Monday from the head office at Johannesburg:—"Output, 29,400 tons; profit, £3000."

VAN RYN.—The following cable has been received from Johannesburg:—"The profit for last month on milling was £271, ditto on cyanide operations £1111, total £1482. The falling off is due to the fact that the mill only ran for 22 days during December."

VICTORY (Charters Towers).—The directors have received the following cablegram from the head office in Sydney:—"Crushed from No. 3 shaft 68 tons for a yield of 49 ounces gold."

WATER TRUST, MINING AND PUBLIC CRUSHING COMPANY OF WESTERN AUSTRALIA.—The following is a copy of a cablegram received from Mr. Carl Hesse, the manager of the company's properties in Australia:—"Millsite Northam large enough. Suitable in every way. Water plentiful, good quality. Much pleased with."—Hesse.

ZEEHAN-MONTANA (Tasmania).—The following cable has been received from Hobart, dated January 20:—"Shipped per Prinz Leopold 350 tons of silver-lead ore containing about 245 tons of lead and 31,500 ounces silver."

COMPANY FINANCE.

Reports, Balance Sheets, Dividends, &c., of Mining and other Companies.

THE MOZAMBIQUE GOLD MINES (LIMITED).

A circular to the shareholders states:—"My directors have the pleasure to submit to the shareholders the following summary of the company's operations, showing the progress made, which they believe will be found extremely satisfactory. After some delay, the transfer of the property, so far as it could be effected in England, was completed, and a power of attorney was sent out appointing Mr. J. R. Pardy, the company's representative in the Mozambique territory, to take the necessary steps to register the transfer and hold the property in trust for the company. Pardy's Mozambique Syndicate, the former owners of the claims now held by this company, had, among other work undertaken for the purpose of proving the direction and quality of the lodes traversing their various blocks of claims, started an adit called the No. 3, or Maxim drive, in the property acquired by our company, and the following extracts from letters received from the mines will show the progress of the work, which is being vigorously prosecuted on our behalf, and promises to yield most important results at no distant date:—"September 1, 1895. The No. 3 Maxim drive is still in the hard blue slate bar some 300 feet from the mouth of the drive." "September 10, 1895. Maxim drive now in 317 feet. We have cut a distinct and solid reef, which we do not seem to have cut in No. 2. It is almost vertical, striking west and east, and comes in both sides in conglomerate, averages close on 2 feet, pans very well, undoubtedly good payable reef." Mr. Pardy wired under date October 11, 1895, to the Guy Fawkes Company:—"Struck a rich reef conglomerate 6 feet wide, 2 feet north of Guy Fawkes main reef. In Ingamasonga same reef is struck. The reef has 2 feet solid quartz, and 5 feet of conglomerate. The latter carries as rich as the reef, and can be put through the mill without crushing. The specimens I have tried showed as good results as any since I have been in the country." Since the above the neighbouring Guy Fawkes Reef Company have started their mill, and the trial crushings gave results of over 1 ounce to the ton. The directors congratulate the shareholders on the great prospective value of the property acquired, which is considerably larger in area, and

therefore, proportionately more valuable than those of the neighbouring companies which have high market values. A portion of the company's working capital is still unallotted, and as the directors wish to take immediate advantage of the cutting of the reef to send out machinery and vigorously work the mine as soon as the news arrives, they now offer them to the shareholders at par before offering them to the public at a premium.

THE WASSAU (GOLD COAST) MINING COMPANY.

A circular to the shareholders states:—"During the month of November last the 10-stamp battery worked 12 days 6 hours, and crushed 241 tons of ore, producing 268 ounces standard gold, and giving a yield of 1 ounce 2 dwts. per ton. In addition to this, tailings and concentrates put through the 12-stamp battery produced 65½ ounces standard, making a total return of 331½ ounces standard. This realised £1291 18s. 10d. Cablegrams have since been received advising the remittance for last month as 234 ounces bullion, and a yield of 19 dwts. per ton. Writing on December 5, the manager states that "the Ashanti expedition has caused some of the native labourers to strike, the majority being hammermen and miners." In a subsequent letter, however, dated December 18, he says that "of the men who had left work some were returning, finding that they would be employed as carriers and not to fight." This temporary hindrance to the work and the usual Christmas stoppage accounts for the returns for December being lower. Two of the adits in the new property (Cinnamon Bippo) have struck a trace of the lode, and more stoping ground in Adjah Bippo will shortly be available. Some increase in the returns may, therefore, be expected in the near future."

—A dividend of 3d. per share has been declared, payable on February 7 next, on the shares of the VICTORIA GOLD MINING ASSOCIATION (Charters Towers).

—The following companies have removed to more convenient offices at Finsbury House, Breamfield-street, E.C.:—The Swan Syndicate (Limited), Brown Hill Extended (Limited), Leadville Silver-Lead Mining and Smelting Company (Limited), Darlot Exploration Company of Western Australia (Limited), Hampton Trust (Limited), Eagle's Nest (Mount Margaret) Gold Mining Company (Limited), Coolgardie Waterworks (Limited).

—HERBERT GOLD (LIMITED), promoted by the Albert Mines Syndicate (Limited), went to account on the 17th inst.

DEATH OF CAPTAIN CHARLES THOMAS.—It is with deep regret that we have to record the death of Captain Charles Thomas, which sad event took place on Tuesday last. The deceased was manager of the Polberro Mine and Cook's Kitchen. His death was totally unexpected, and the intelligence of it was received with the greatest grief by all who had the pleasure of knowing him. As a practical miner, he had very few, if any, superiors, whilst personally he was held in the greatest respect. His loss will be widely felt. Captain Thomas came of an old Cornish mining stock. He was the son of Captain William Thomas, of Roskear Farm, and of South Roskear and other mines. His mother was a sister of the late Captain Joseph Vivian, of Reskadinnick. He married Miss Jane Trevithick Edwards, daughter of a Cornish farmer, and great niece of Richard Trevithick, the eminent Dolcoath engineer, in the early part of the century, and whose father was manager of Dolcoath in the latter part of the last century. Captain Thomas was 64 years old at the time of his death. He has left a widow, four sons, and six daughters. The eldest son is Mr. Wm. Thomas, C.E. (lecturer on mining and ore dressing, and instructor in mine surveying at the Camborne School of Mines). Another son, Fred, is assistant manager of the Modderfontein Mine in Africa. Jack, a third son, is employed under the same company. A daughter, also in Africa, is the wife of Mr. Robert Hall, consulting chemist. The other daughters, and Charley, formerly clerk at Cook's Kitchen, are all at home.—Mr. John B. Reynolds, Chairman of Polberro, says of him:—"A more conscientious, able, and thorough-going man it was impossible to find anywhere. It may, indeed, be doubted whether he has left behind him his superior as a practical miner in the country."

DIARY.

Saturday, January 25.
Anglo-African Gold Properties, Winchester House, 11.

Monday, January 27.

Kathleen Gold Mine, Winchester House, 12.
Southern Land, Limited, Cannon-street Hotel, 12.
World's Treasure, Limited, Cannon-street Hotel, 12.
Marie Rose Gold Mining, Winchester House, 3.
Black Swan Gold Mine, 2, East India Avenue, 3.30.

Tuesday, January 28.

Gold Fields of Mysore, Limited, Cannon-street Hotel, 12.
Lone Hand Gold Mines, Winchester House, 12.
Hannan's Proprietary Development, Cannon-street Hotel, 2.30.
Chameleon Gold Mining, Cannon-street Hotel, 3.
South Australian Petroleum, Winchester House, 3.30.

Wednesday, January 29.

Oceana Transvaal Coal, Cannon-street Hotel, 12.
Gold Estates (Transvaal), Cannon-street Hotel, 12.15.
United Gold Fields of Manica, Cannon-street Hotel, 12.30.
Waihi Grand Junction Coal, Winchester House, 2.30.

Thursday, January 30.

South-West Africa, 3, Laurence Pountney-hill, 12.
Hannan's Find Gold Reefs, Winchester House, 2.
Associated Gold Mines of W.A., Winchester House, 2.30.
Turon Gold Mines (Limited), Winchester House, 3.

Friday, January 31.

Kapanga Gold Mining, Winchester House, 12.
Swartzland Transvaal Land, Winchester House, 12.
Ramage Syndicate, Winchester House, 12.30.
Hauraki Gold Mining, Winchester House, 12.30.
Blagrove's Freehold Gold, Winchester House, 1.
Foreign and Colonial Investment, Cannon-street, Hotel,

DUNSFORD'S STOCK EXCHANGE HANDBOOK.—We have received a copy of this extremely useful handbook, which in every respect sustains the standard of previous editions. It is compiled, edited, and published by Follett Dunsford, 11, Royal Exchange, Leeds.

In consequence of inquiries made at Messrs Albu's respecting the alleged scarcity of native labour in the Transvaal, they inform us they cabled to their house in Johannesburg, and have received a reply to the effect that there is absolutely no difficulty as to native labour.

C. PASS & SON (Limited), BRISTOL,
ARE BUYERS OF
LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS,
ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c.
and DROSS or ORES containing
TIN, COPPER, LEAD, AND ANTIMONY.

**HENRY WIGGIN & CO. (Limited),
NICKEL AND COBALT REFINERS,
MAKERS OF BEST RED LEAD FOR FLINT GLASS
MANUFACTURERS,
BIRMINGHAM.**

**LAMBERT'S WHARFAGE CO.,
PRINCE OF WALES DOCK, SWANSEA.**

Ores, Mattes Regulus, and Bars received and prepared for market.
Copper, Lead, Tin, Spelter, and Pig Iron Received, Weighed, and
Sampled, and Warrants issued against same.

N.B.—Warrants are on Accepted List of London Metal Exchange.

Regular lines of steamers from America, Europe, &c.

Good prices can be obtained for low produce Copper Ores. Send
fair samples of not less than half a pound.

A MALGAMATOR REQUIRED IMMEDIATELY, for Gold Mine
on the West Coast of Africa. Experienced in Milling and
Amalgamating.

Apply, by letter, giving references and stating salary required (all found), to "P. 497," at SHELLEY'S, 38, Gracechurch Street, E.C.

MINE CAPTAIN WANTED for Gold Mine on the West Coast
of Africa. Must be thoroughly experienced in all Mining
work.

Apply, by letter, stating age and salary expected (all found). Enclose (copies only) testimonials to "Q. 498," at SHELLEY'S, 38, Gracechurch Street, E.C.

MINERS REQUIRED IMMEDIATELY, for a Gold Mine on
the West Coast of Africa. Must have had considerable
experience in Sinking Shafts, Driving, Stoping, and Timbering on
soft ground. Aged about 30. Wages £10 per month, all found.
Apply, by letter, enclosing copies of testimonials and refer-
ences, to "O. 496," at SHELLEY'S Advertising Offices, 38, Grace-
church Street, E.C.

SHIPPING.

CASTLE LINE.—CAPE & NATAL MAIRS.



**WEEKLY SERVICE FOR THE GOLD
FIELDS OF SOUTH AFRICA.**—The
CASTLE COMPANY'S STEAMERS leave
LONDON (East India Dock Basin, Blackwall)
every FRIDAY, and sail from SOUTHAMPTON
every SATURDAY.

Steamers.	London.	Southampton.
Garth Castle (via Canaries)	Jan. 31	Feb. 1
Norham Castle (via Madeira)	Feb. 7	Feb. 8
Doune Castle (via Canaries)	Feb. 14	Feb. 15
Tantallon Castle (via Madeira)	Feb. 21	Feb. 22

Also for Madagascar and Mauritius.

Return tickets to all Ports.

Free Tickets by Castle Express from Waterloo to Southampton.
Apply to DONALD CURRIE and Co., 3, Fenchurch Street
London, E.C.

West End Agency, THOS. COOK AND SON, 13, Cockspur Street.

UNION LINE.

**FOR SOUTH AFRICAN GOLD FIELDS.—
WEEKLY SERVICE.—CAPE OF GOOD
HOPE, NATAL, and EAST AFRICAN ROYAL
MAIL STEAMERS.**—The UNION STEAMSHIP
COMPANY'S ROYAL MAIL and INTER-
MEDIATE STEAMERS will sail as follows for
SOUTH and EAST AFRICA, calling at MADEIRA
and TENERIFFE.

Steamers.	Antwerp.	Rotterdam.	Hamburg.	Southampton.
Tartar				Feb. 1
Greek (twinscrew)	Jan. 26		Feb. 1	Feb. 8
Moor				Feb. 15
Pretoria		Feb. 9	Feb. 15	Feb. 22

+ Calling at Madeira.

I Via Teneriffe. 5 Via St. Helena.

Free railway tickets from London and Plymouth to Southampton.
Cheap Tickets are issued for Passengers' Friends.
The Union Line Express is despatched from Waterloo Station (Main Line Platform) every Saturday.

RETURN TICKETS ISSUED.

Apply to the UNION STEAMSHIP COMPANY (Limited), Canute
Road, Southampton; 14, Cockspur Street, London, S.W.; and South
African House, 94 to 96, Bishopsgate Street Within, London, E.C.

THE ADELAIDE OBSERVER.

Mining men and others in all parts of the world, who wish to secure
the most complete budget of Australian news, and particularly of Mining Intelligence,
will do well to have THE ADELAIDE OBSERVER regularly posted to
them.

Special attention is given to Mining operations in Western Australia as well
as in all other parts of Australasia.

THE ADELAIDE OBSERVER, Price Sixpence. Posted abroad, 7s. 6d. per
quarter, or £1 10s. per annum.

HEAD OFFICE—GREENFIELD STREET, ADELAIDE, SOUTH AUSTRALIA.

LONDON OFFICE—80, FLEET STREET.

THE OBSERVER is a splendid medium for Advertisements of Mining
Machinery and requisites.

Advertisements received by all the principal London Agents or at the
London address, given above.

THE AUSTRALIAN MINING STANDARD

IS THE
ONLY RECORD OF MINING, FINANCIAL, and ENGINEERING
PROGRESS IN THE SOUTHERN HEMISPHERE.

PUBLISHED WEEKLY. ILLUSTRATED.

Subscription, 30s. per annum (payable in advance).

Dr. E. D. PETERS, Jun. says:—"The Mining Standard is the best Mining
Journal in the World, see one."

THE AUSTRALIAN MINING STANDARD COMPANY, LIMITED.

Printers and Publishers,

SYDNEY AND MELBOURNE.

The COUNTY GENTLEMAN'S PAPER for Cheshire,
Shropshire, and North Wales is

THE CHESTER COURANT.
(ESTABLISHED 1730.)

The CHESTER COURANT goes into all the best houses,
and has a Subscription List of remarkable scope and character.
It is a most suitable medium for advertising Patent Machinery
used on large Farms or County Estates.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

An Illustrated Record of Mining, Metallurgical, Railway,
Financial, Industrial, and Engineering Progress.

ESTABLISHED IN 1835.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL
GAZETTE, published every SATURDAY MORNING, price
SIXPENCE, is recognised throughout the World as being the oldest,
most influential, and most widely circulated Journal devoted to the
interests which it represents. It circulates

ALL OVER THE WORLD.
Amongst Mine Owners, Capitalists, Investors, Mining, Metallurgical
Engineers, Manufacturers, &c., &c.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL
GAZETTE has correspondents and sources of information in almost
every quarter of the globe. Its policy is absolutely independent;
its circulation is cosmopolitan.

THE MINING JOURNAL is neither controlled, nor is any
interest in it held or exercised, by any mine owner, speculator,
or syndicate; and it is in no way connected with any share-
dealing agency.

TO CORRESPONDENTS.—Letters on Editorial Matters, or containing
literary contributions should be addressed to "THE EDITOR." All matter
intended for insertion must be written on one side of the paper only. The
return of rejected manuscripts cannot be guaranteed. The Editor invites
correspondence and items of news or information from readers in all parts
of the world.

TO SUBSCRIBERS.—The Annual Subscription to THE MINING
JOURNAL, including postage, is for :—

The United Kingdom, £1 4s. ;

Abroad, £1 8s. ;

payable half-yearly in advance. It can be purchased at all Railway Book-
stalls and Newsagents throughout the United Kingdom for 6d.

TO ADVERTISERS.—The following is an abbreviated Scale of Charges for
Advertising:—Companies' Prospectuses, £12 12s. per column, or £20
per page; Companies' or Legal Announcements, 9d. per line, with a Minimum
charge of 7s. 6d.; Sales by Auction, Publications, For Sale, Wanted,
&c., &c., 9d. per line, with a Minimum charge of 4s.

Displayed (Trade) Advertisements of 2 inches in depth (or more), Single
Column measure, will be inserted at the following rates:—For 52 insertions
2s. 6d. per insertion for each inch in depth; for 26 insertions 3s. 6d. per insertion
for each inch in depth; for 13 insertions 3s. 6d. per insertion
for each inch in depth. Terms for special positions and contracts may be
had on application.

*** ADVERTISEMENTS** (which should be sent direct to
THE BUSINESS MANAGER) can now be received for the forthcoming issue
of THE MINING JOURNAL, RAILWAY AND COMMERCIAL
GAZETTE, on FRIDAY, at 18, FINCH LANE, E.C., up till 6 p.m., and
at 3, DORSET BUILDINGS, SALISBURY SQUARE, E.C. until 9 p.m.

Editorial and Advertisement Offices:
18, FINCH LANE, LONDON, E.C.

Telegraphic and Cablegraphic Address: "TUTWORK, LONDON."
Codes used: "A.B.C." Moreing's, and "Universal."

CONTENTS

Of this Number of "The Mining Journal, Railway and
Commercial Gazette," January 25, 1896.

NEW PATENTS	105
JOINT STOCK COMPANIES—New Registrations	105
CONTRACTS OPEN	105
MECHANICAL ENGINEERING &c.	
The Dry Process as applied to Gold Mining	106
QUICKSILVER MINING IN THE DISTRICT OF GUADALCAZAR	106
MINING & METALLURGY OF QUICKSILVER IN MEXICO	107
MEETINGS OF MINING COMPANIES—	
Gibraltar Consolidated Gold Mines, Limited	107
The Victor-Waihou Gold Mining Company, Limited	108
Hannan's Excelsior, White Feather, Light of Asia, Amalgamated Great Buninyong, Tokatos of Hauraki, Africana, Limited	109
Menzies Pioneers, Menzies Consolidated Gold Mines	110
Doric Gold, Stray Shot and Excelsior Gold	111
Phoenix, Limited, Dunderberg Gold, Paddington Consols	112
Gleeson's Success Gold Mines, Limited	113
LATEST FROM THE MINES: Cables and Telegrams	115
COMPANY FINANCE	115
DIARY FOR NEXT WEEK	115
LEADING ARTICLES—	
Statistics of Mines and Minerals	116
The Transvaal and Germany, Gibraltar Consolidated	117
NOTES AND COMMENTS	117
THE MINING MARKET	118
NEW ISSUE	119
THE METAL MARKETS—	
The London Metal Market	119
"THE MINING JOURNAL" SHARE LIST	120-121
PARIS LETTER	122
CORRESPONDENCE	122
MINING IN CORNWALL AND DEVON	123
OUTPUT OF THE SOUTH AFRICAN MINES	123
THE UTLANDER'S LETTER TO DR. JAMESON	124
SOME WESTRALIAN CRUSHINGS	124
REPORTS FROM THE MINES	124
METAL CIRCULARS	127
PROVINCIAL SHARE MARKETS	127
NOTES FROM ANDALUCIA	128
BRITISH GUIANA'S GOLD INDUSTRY	128
INSTITUTE OF MINES AND FORESTS OF BRITISH GUIANA	128
ADVERTISEMENTS—(See Index to Trade Advertisements, p. 102.)	

LONDON: JANUARY 25, 1896.

STATISTICS OF MINES AND MINERALS.

THE year just past has left a good many legacies of un-
finished work to the present one in most departments of

the industries in which we are especially interested, and
it were greatly to be wished that these arrears could be as
easily and as successfully disposed of in every case as they have
been in that of mineral statistics by means of the volume we
have recently received—namely, the First Annual General
Report upon the Mineral Industry of the United Kingdom of
Great Britain and Ireland for the Year 1894, issued by Dr. LE
NEVE FOSTER. Looked upon as mere statistical matter, the
volume is obviously out of date, as far as our own country is
concerned. We are already beginning to clamour for statistics
for 1895, and if this volume contained nothing more than its
title would seem to indicate, its obvious destination would be
the waste-paper basket. The title is, however, delusive; this
is one of the most valuable reports ever yet issued by the
Statistical Department of the Home Office, and for once in a
way the official title of an official publication errs on the side
of modesty. This fact alone is worthy of being recorded; but
far more important is the further fact, which we are delighted to
chronicle, that the powers that be have at last apparently
awakened to the circumstance that there is such a thing as foreign
mining, and that it imports the British miner very much to
know what his foreign competitors are doing. We have more
than once drawn attention to the fact that foreign nation-

have long ago seen the importance of universal mineral statistics
and information on mining matters, whilst we in England have
remained content with our national statistical reports, which
though excellent in many respects, are defective in not a few
directions. It will be remembered that a Departmental Com-
mittee upon mining and mineral statistics was formed to report
upon this subject, and that the report was issued in the spring
of last year, and was noticed at the time in our columns. Its
result was a complete reorganisation of the system upon which

British mineral statistics had up till then been published. The
summary of statistics was to be issued more promptly than
before, although it omitted a good deal of information, much of
which could, however, be very well indeed spared, although, as
we pointed out at the time, certain additions were urgently

required if these summaries were to be really useful to the class
of men for whose convenience they were supposed to be issued.
Then later on—a good deal later on, in fact—we had the annual
mineral statistics of the United Kingdom, which contained

most of the usual information, and which forms the standard
work of reference for all concerning British mining. And
now, lastly, we have before us the general annual report,

issued in accordance with the recommendations of the above-
named committee, who suggested that such a report should be
prepared, and that "it should contain tabulated statements,

which will enable comparisons to be made between the different
mining fields, counties, or districts, as regards persons employed,
output, accidents, death-rates from accidents, way-leaves, hours
of labour, wages, consumption and distribution. These com-
parisons should be illustrated, as far as possible, by diagrams.

The mode of occurrence of the different minerals should be
briefly described, and other matters of general interest relating
to mining might be added. . . . The report should also
institute a comparison between the mining industry of the
United Kingdom and that of foreign countries."

The moving spirit of the commission we need not remind our
readers was Dr

the country, but according to the metal produced, so that, for instance, anyone wishing to know the world's production of copper, could see at a glance what this production is, and to what extent different countries contribute to the total. At present this information can only be obtained by a troublesome search through the volume. There can be no question but that such a table would be infinitely more valuable to the student of mineral statistics than some of these in this general report; Appendix No. 9, for instance, which is merely a list of the names of those persons who have had certificates of competency as managers and under-managers granted to them in 1894, and which should be relegated to the "Mineral Statistics of Great Britain."

This and a few other tables could very well indeed be dispensed with. We think, for example, that the entire chapter devoted to prosecutions could be fairly placed in that category. With regard to the statistics of mineral production proper, we see, with much pleasure, that the output of British mines is given in one table in metric tons. We would suggest that all countries should publish their mineral output in two columns, one calculated according to the weights and measures used in the respective countries, and the other by metric tons for the commoner substances, and by kilogrammes for the precious metals and gems. Similarly the values should be expressed in the coinage of the country and in pounds sterling. England is to so great an extent the principal market for the mineral productions of the world that the latter conversion could present no difficulties, and the metric system is now so largely adopted by various nations (whose systems of coinage and units of value may, however, differ widely) that we think it is right that this system should be adopted by all, ourselves, of course, among the number, and we hold that a great step towards general uniformity would be realised if the above system were adopted in the summaries and in the mineral statistics proper.

The irregularity of date at which the various mineral statistics of different countries appear is a difficulty, and most nations are, we note, a good deal behind ourselves, some a few months, others a few years. Nevertheless, figures have been mostly obtained sufficiently modern to give a really good idea of the mineral industry as it stands to-day in different countries, and it is possible to see fairly well what our various competitors are doing. The values, however, are in very many cases not tabulated in sterling, so that without knowing the rate of exchange it is impossible for an Englishman to see what the value of a mineral is abroad as compared with British prices, and even when the rate of exchange is ascertained a tedious calculation has to be gone through. The cost of production is very rarely given, although it is an item of the first importance. Possibly it cannot always be ascertained, but as the number of persons engaged in mining each mineral seems mostly to be known, and as the rate of wages in each country should always be ascertainable, it would not be difficult in future years to state the cost of the labour engaged in producing each mineral, and whenever known the amount of royalties and taxes payable should also be stated. Knowing these two items, it would always be possible to estimate the total cost of production with a fair amount of accuracy. What we want to see is that the commercial aspect of mining statistics shall be recognised to the fullest extent. Mining is, after all, a business, and has to be conducted on commercial principles, with the object of making money, and this is a fact that is too often lost sight of. It should be borne in mind above all in the compilation of mineral statistics, and if this is done, we feel sure that future volumes of the annual general report will be eagerly welcomed by that very large and important section of the community whose income depends so greatly upon their prompt and accurate assimilation of all information available respecting the amount and value of mineral production all over the world. Meanwhile although we have criticised the present annual report freely, we have done so in a spirit of friendliness—indeed, we might almost say thankfulness—towards Dr. FOSTER and those who have been associated with him in producing this valuable volume. We have not dwelt on its many excellencies; our readers will rapidly discover those for themselves, and if we have pointed out what we look upon as defects it is only with the object that the compilers of future volumes may consider whether they cannot by adopting our hints make them even more useful to the mining public of Great Britain.

THE TRANSVAAL AND GERMANY.

OF all the explanations that have been offered in this country of the presumed motives which caused the German Emperor to dispatch his now historic telegram, that one which seems to have found the most general acceptance ascribes it to an outburst of petulant vanity. "The whole world is talking about President CLEVELAND and President KRUGER. Not a soul ever mentions Me!" This seems to be assumed as the train of thought that actuated His Imperial Majesty when he sent that message. No doubt it must be galling to an Emperor, born in the purple, to find himself put in the shade by a couple of ordinary Presidents, who are merely elected by the popular voice, and, of course, vanity will impel a man to do strange things. Nevertheless, we fancy that it is quite possible that other and deeper designs may have prompted the course which Germany seemed prepared to pursue, and that this telegram may have been the outcome of a more profound statecraft than has generally been supposed. Although it is not, perhaps, very widely known in this country, yet our readers are no doubt familiar with a work which was reviewed at some length in our columns in October, 1894—namely, BERGRATH SCHMEISSER'S book on the Transvaal. Let us recall briefly the inception of that work, and look at it in the light of recent events.

The following is BERGRATH SCHMEISSER'S own account of how he came to be sent to South Africa. He says "that the repeated assertions of political economists that there was not sufficient

gold in existence to cover the requirements for coinage and industrial purposes, and that an early diminution in the gold output, which would endanger the financial position of such countries as had adopted a gold standard, was to be expected, induced the Prussian Government to collect material to be submitted to a Commission on the raising and fixing of the price of silver. The Government decided to investigate the question how much gold existed in the world, and for how long it was likely to be able to satisfy the needs of the world. Seeing that the gold production of the Transvaal had increased so enormously since the discovery of peculiar deposits thereof at Witwatersrand, that this Republic was already in 1892 the third largest gold producer of the world, whilst the most divergent and contradictory reports were current about these deposits, the Royal Prussian Minister for Trade and Industry, Herr von BERLEPSCH, determined to send a Government mining official to the Transvaal to investigate thoroughly these gold deposits, together with the mining and economical situation of that country."

No one, probably, needs to be reminded of the very thorough and efficient manner in which BERGRATH SCHMEISSER executed the task thus imposed upon him, nor of the conclusions he drew as to the actual magnitude and probable future importance of the gold mining industry of the Transvaal. To use his own words, he brought back the conviction that "the quite exceptional mineral wealth of the country had already attained to a very great importance for the economical relations of all other civilised nations, and would continue to do so in the distant future."

Does not this conclusion, so clearly expressed, seem to supply a very powerful motive for the interference of Germany? It does not need the closing sentences of BERGRATH SCHMEISSER'S work, in which he points out that German commerce was at that date not even represented to the extent of 2 per cent. on the imports of the Transvaal, that nothing like sufficient attention had yet been given in Germany to this important market, and that the country presents a most fruitful field for the development of financial, commercial, and industrial activities; it does not need these remarks to show that SCHMEISSER'S attention was directed to every subject, information on which could benefit his fellow countrymen. It is fairly obvious that Germany, with her heavy military expenditure, which is slowly but surely draining her resources, felt that her gradually lessening supply of gold was a serious source of weakness, and that the gradual depreciation of silver threatened her financial relations with grave peril; Germany, be it remembered, produces about 60 times as much silver as gold.

It would, therefore, seem clear that Germany would be most especially anxious to get some control in a gold-producing country. The world's greatest gold producers—the United States and Australia—were clearly beyond the sphere of possible German influence; with the Transvaal something might be done. Accordingly, it was resolved to obtain authentic information about the surerous wealth of the Transvaal, and BERGRATH SCHMEISSER was, therefore, dispatched not to the first nor to the second, but to the third on the list of the world's gold producers. His report, as we know, was favourable in the extreme, and if what has taken place within the last few weeks is not the sequel to the prologue he has written, we can only say it looks uncommonly like it. At any rate, we are satisfied that we are doing good service by refreshing the public memory with regard to SCHMEISSER'S work, and to the circumstances that led to its preparation.

GIBRALTAR CONSOLIDATED.

WHEN this company was floated, in the closing days of September, there was not the slightest difficulty in getting the capital subscribed. Subscribers saw at once that it possessed all the possibilities of brilliant success, and, therefore, they hastened to secure an interest in what was, to say the very least, a highly promising venture. Apart from the extremely favourable report of so eminent an authority as M. EISLER—to which we shall refer later—it was to be managed by the famous firm of Messrs. JOHN TAYLOR and SONS—a firm in which the public justly place the most implicit confidence. Undoubtedly, it was in a great measure owing to the fact that these eminent mining engineers would be associated with its management, that the company was regarded with so much favour, for it was—apart, we repeat, from M. EISLER—a sure guarantee that there would not be wanting the very greatest technical advice to ensure the success of the undertaking. Then there was further associated with the company the name of M. EISLER, whose name is familiar in every quarter of the globe where gold mining is carried on, and who was not likely to risk his great reputation in speaking eulogistically of a property possessing but little promise. On the faith of such a man one can repose the greatest confidence, and we unhesitatingly endorse what the Chairman said respecting this gentleman at last Tuesday's meeting:—"M. EISLER is a mining engineer of great experience, and of well-known and proved integrity. His works on mining and metallurgy have become standard books of reference throughout the mining world. His high character and professional attainments are well known to some of our largest shareholders. In fact, those who know most about M. EISLER are amongst the largest holders of our shares, and would probably not have been interested in our company at all but for their confidence in his probity and ability." This is the gentleman, therefore, who has staked his considerable reputation in assuring the shareholders that they possess a property which will, in all reasonable probability, take its place in the very forefront of gold mines in Australia, and which, when in effective operation, will yield at least 2000 ounces of gold per month. He calculates that for a considerable time to come the company can rely on raising ore of a high-class quality, which will yield an average result of 3 ounces per ton. His opinion of the property is endorsed by another high authority, in the person of the Chief Government

Inspector of Mines, who, in his report to the Minister of Mines in August, 1894, directed special attention to the rich character of the Gibraltar Mine, its successful development, and promising prospects. Though it is yet too early to express any decided opinion upon the prospects of the company, we think the shareholders can look forward with every confidence and hope to its future. The probabilities of success—and of brilliant success—are highly in its favour. The fact that it is not situated in Western Australia need create no discouragement. People are beginning to think that nothing good can come from anywhere but this colony and South Africa, and it is well, therefore, to give them a dazzling surprise now and then. The praises of New South Wales have not been sung for many a long day, not because its achievements are not such as to inspire peans, but because the public have persistently ignored them, and turned their attention to other fields. If, however, the Gibraltar turns out the magnificent success eminent experts anticipate, it will be an excellent lesson and instruction to the public, and show them that gold mines exist elsewhere than in West Australia and the Rand. We sincerely advise our readers to read carefully the full report, which appears elsewhere, of the statutory meeting of the company held last Tuesday. They will find therein much matter for study and reflection, and, we hope, for ultimate profit. The statements before the meeting were lengthy and detailed. All the better, therefore, for though it will take time properly to digest them, that time will be well spent.

NOTES AND COMMENTS.

At the moment of going to press there is little to say, beyond what has already been said, with respect to the position of affairs in the Transvaal. The situation is, as it were, in *status quo*, and it is impossible to predict, with anything approaching certainty, what the outcome will be. The letter of the Uitlanders to Dr. Jameson—which we publish elsewhere—is likely to arouse universal sympathy for the latter, though it does not offer any excuse for his precipitate and dangerous action. With the tone of the letter very few can find fault, for it sets forth in no extreme revolutionary spirit, grievances which are real, and which fully justify the discontent and dread of serious consequences which the tenor of the epistle reflects. It will be noted that it is signed by the gentlemen who have been arrested, and confirms the fact that they were the ringleaders in the movement which has brought about such deplorable consequences. It does not acquaint us with anything of which we were previously ignorant, but it is likely to arouse into greater activity sympathy for the grievances of the oppressed Uitlanders. During the week the Kaffir Cross has not shown any great degree of vitality, nor, on the other hand, has the boom in the West Australian section developed much further strength. It does not, however, reflect any pessimism on the part of the public, so much as patience and caution. That there is a tendency, however, to divert attention, for the time being, from the African section to the West Australian, is only too apparent, but it does not go to prove, as some pessimistic individuals would have us believe, that this diversion of attention will be permanent. We believe, in spite of the critical condition of affairs, that there is yet a bright future before the country which is now in the forefront of the gold fields of the world.

MR. WALTER GRITTEN'S statement from the chair at the statutory meeting of shareholders in the Doric Gold Mines was characterised by one or two features that are not generally present in preliminary announcements of directorial hopes and intentions. The prospects of the company are rather more broadly based than is generally the case with mining undertakings. The company's property consists of a group of mines situated on Saxon Mountain, Clear Creek, Colorado, within the town limits of Georgetown, and within 200 yards of the Colorado Central Railway, so that, as regards transport facilities, there is not a great deal left to be desired. Among the lodes authoritatively stated to pass through the company's properties are the Americ, Britannic, Celtic, Germanic, Doric, Electric, and Ionic, some of which lodes are said to have yielded the richest ore ever produced in Colorado. In addition to possessing these promising properties, the company is favourably situated, in that it starts upon its career with all the advantages of the considerable development works already carried out by the earlier owners, and in the full light of experience thus accumulated. The shareholders have the satisfaction of knowing that they have not to pass through a tiresome period of preliminary development before reaching a point where, according to the estimates formed respecting the lodes in the mines, dividends should be forthcoming. The assays taken from the mine work out at very good figures, but they are, of course, no more than assays, and should not be made to form the basis of too sanguine a calculation as to future results. The shareholders have had the advantage of hearing opinions from gentlemen who have personally visited the mines, and their uniformly favourable character is a distinctly good sign.

We are decidedly pleased with the tonnage of the annual report just issued by the directors of the Gold Fields of Mysore (Limited), for, besides giving a record of an excellent year's work, it foreshadows prospects of a distinctly encouraging nature. Of late, as we have duly chronicled, Indian shares have been regarded with much favour, and have displayed wonderful strength in the midst of discouraging circumstances. The accounts of the Gold Fields Company show a gross profit on the year's operations of £41,932 11s. 7d. After writing off various amounts there remains as net profit the sum of £27,955 2s. 10d., and it is proposed to distribute to the shareholders fully paid-up shares of the Oriental Gold Mining Company of India (Limited), being equivalent to a divi-

dend of 10 per cent. Several points in the mine are of distinct promise. Though operations on the West Balaghat lode have not resulted in any further discoveries of importance, Captain Roberts—the new superintendent—is of opinion that the lode will be found richer when further developed. In connection with the Oriental lode, a discovery has recently been made in the 470 feet level, where quartz has been met with assaying 2 ounces 1 dwt. 10 grains of gold to the ton. This is regarded as very encouraging for deeper developments, and no time will be lost in continuing the sinking of the shaft below this level. The estimated quantity of quartz now in reserve is 12,000 tons, being an increase of 300 tons during the past year.

HOWEVER else they may differ, and points of difference are plentiful enough, the representatives of metal-masters and men, delegated by the British Iron Trade Association to enquire into Continental methods, have achieved unanimity in their recently issued and highly instructive report. The delegation, which consisted of seven masters and seven men, had it in charge to enquire into the circumstances conditioning Continental competition in the iron and steel industries, with a view, probably, to discovering the causes which have led to the important advances made against our own industry by German and French competitors. The enquiry was not undertaken too soon. German iron during recent years has won entry in ever-increasing volume into our colonies—especially into India and Australia—as well as into the Mother Country, and while the British industry is in that unhappy condition to which it is doubtful whether the word "stationary," or the more depressing epithet "retrogressive," is the more applicable, the indefatigable subjects of the German Emperor have made exceptional progress in the direction that for some reason seems barred to us. The readiness and courtesy with which the most ample information was everywhere accorded to foreign countries upon the personal application of the delegation, is a pleasing reminiscence connected with the enquiry, and the results of the whole elaborate investigation are embodied in 28 sections of valuable matter, such as is well worth the careful study, as well of the practical industrialist, as of the economical thinker. The multifarious factors in the cost of production, and the way in which they are conditioned in other countries, are the subject of the most elaborate and painstaking analysis. Statistics are given to show the solid improvement that has taken place lately in the efficiency of skilled Continental labour.

From these broad features, it will be seen that in appointing the delegation the Association have substantiated one further claim upon the gratitude of their countrymen. To investigations, carefully conducted and wisely turned to practical account afterwards, will be due any advantage which England may be able to gain upon her competitors. The Association have done a great work in collating the materials upon which future industrialists must draw for guidance, and there the work of that society must almost of necessity cease. It will be for the individual manufacturer to put the suggestions with which the report is replete from opening to conclusion into practical effect. Bearing in mind the mixed character of the commission, it is pleasing to note that its members were unanimous in the views taken of foreign labour and capital relations. No fewer than four sections are devoted to this all-important subject, and the discovery that compulsory contributions from both masters and men to pension and accident funds, though in some ways a rather heavy burden upon the industry, appear in the result to secure harmony between both parties, may not be without its beneficial effect upon trade relations in this country. The statement under consideration further records the opinion of the delegation, that Continental producers have the advantages of cheaper shipping freights from port to port, and transport rates from works to coast. If this prove correct, and there is no reason to doubt it, given as it is over the signatures of men well qualified to judge of the matter, there is a plain explanation which may account, at least in a large measure, for the fact that England is somewhat behind other countries in industrial progress. In taking leave of the subject we may express the hope that the report, thus drawn up at great cost in time and money, may receive careful study at the hands of those for whom it is designed, and that our industries may be substantially benefitted thereby.

TURKEY is so prominently and persistently associated with the Eastern Question in its multifarious bearings, that the mineral resources latent in the countries under the government of the Sublime Porto are apt to escape recognition. Perhaps the real reason underlying this neglect is the fact that permission has only recently been granted to exploit the Turkish mines. Lately, however—hardly, it may be thought, due to the communication of activity from Europe, but to other and local causes—a sort of industrial revival on a small scale has taken place, and in one or two channels of mining enterprise Turkey is giving her riches to the world. It is not probable in connection with silver or gold mining that the Sultan's dominions will ever be known to fame. The riches of that romantic country lie in less pretentious directions, which are none the less workable on a commercial scale, because in intrinsic value the product does not equal the more precious metals. Chrome ore is worked on a large scale in some parts of the Empire, and since it is chiefly exported to Britain and Germany the fact possesses a certain interest for us which might otherwise be wanting. The recent action of the Turkish Government in granting concessions authorising the extraction of a certain quantity of chrome ore without firman, on payment of the Government tax and export duty, has had a beneficial effect in stimulating enterprise, and in giving a direct and strong impetus to mining activity. The proportions of the chrome industry may be gathered from the fact that for the past year Germany alone has received from Turkey more than 8000 tons of product.

If the inception and continuance of a West Australian boom, such as is predicted by many who are in the habit of closely scrutinising the financial horizon, depends upon the energy and enterprise displayed by the industrial leaders in the colony itself, there is very little ground for doubting its ultimate arrival. News is continually coming to hand of fresh discoveries made in the neighbourhood of Coolgardie, and also of some step in advance in the working of one of the neighbouring mines, or in the general condition of mining in the colony. Though the excitement connected with the first gold rush into Coolgardie has in a large measure abated, and the mining population have settled down to the less fascinating, but, perhaps, more profitable occupation of developing resources already known to exist, the town and neighbourhood are by no means deprived of the excitement of new finds. Prospecting parties are still engaged in a close examination of the district, and it might almost be said, without exaggeration, that every day brings with it something in the nature of a surprise to the hardworking and enterprising denizens of this new community. Considerable patience is needed to thread through the mass of detailed workings which pour upon us with the arrival of every mail, but taken in the aggregate they must total out at something startling in its magnitude, which will send the enquirer a long way for standards of comparison. The water question still looms dim in the distance as something big in its influences upon the future of the colony, but it is safe to say that people do not regard it as partaking of the nature of a gloomy portent, as they pretty generally did on the first impulse.

PROBABLY the rapid industrial growth of West Australia will be found most strikingly and convincingly reflected in the quick process of civilising the desert—if the phrase may be allowed—which is going on at Coolgardie and the Murchison. The public have already been put *en rapport* with the vigorous measures for the spread of communication and the removal of general obstacles to commercial and industrial progress which the Legislature, fully, though tardily, awakened to the responsibilities of their position, have either carried into effect, or are revolving to attain a matured judgment. Little, therefore, need be said upon that head, but the formation of an electric light company, and the erection of poles, the provision by the Coolgardie Town Councils of regulations restricting the use of inflammable materials in buildings (lest fire overtake the whole town) the proposal to build a fire station and the establishment of a salvage corps—these are facts which speak in an impressive key and measure, not the less forcibly because indirectly, the enormous expansion of economical and social activity that is now proceeding in West Australia. Advices to hand state that a Stock Exchange has been formed at Norseman, and that it boasts 25 members—a piece of news that makes us half expect the passing of a law, parallel to the one lately carried into effect at New Zealand, insisting that a register of shares and a power of attorney for every local mine shall be sent into the colony. Matters are hardly, perhaps, sufficiently far advanced for that now, but at the present rate of progress they very soon will be. But, if the rate of movement at Coolgardie and Murchison has already been rapid, it is interesting to forecast how rapid it will be when the whole system of railway communication, already fully developed on paper and soon to be accomplished in wood and iron, is wholly completed. The costs of transport will be so enormously lightened that the whole colony will doubtless come to the front at a pace that has hitherto been unimaginable. Perth and Coolgardie will, during the next five years, pass through all the crucial tests that have always to be undergone by a young community, and it is a circumstance which bodes favourably that those who know these centres of Australian life the best are confident as to the result.

MR. PICKARD's recent speech before the Miners' Federation of Great Britain is set in the tone everyone is familiar with, as generally ruling at labour meetings. The men are naturally enough, according to this economical philosopher, always in the right in their disputes with the colliery owners and ironmasters, and the employers with similar persistence in one path are invariably in the wrong. To this slapdash and wholesale method of mental procedure there can, in the nature of things, be very little answer to make. In such cases it is generally a mere waste of speech to suggest that the colliery owners and the manufacturers are themselves bound straitly enough in the cast iron conditions regulating production, and that if competition is to be successfully waged against rival countries—and the stress of commercial competition is becoming every year greater—the capitalists are not at liberty to devote whatever sums may be demanded of them to discharging the wages bill. There never yet was a reduction made in the rate of wages paid that was not denounced as an attempt to victimise the horny-handed sons of toil, and yet it seems to follow as a natural corollary that if wages are to be put up when times are flourishing, they must undergo some corresponding reduction when a period of depression supervenes. It is impossible not to sympathise keenly enough with the men who spend so large a part of their lives in the gloomy recesses of a coal mine, or amid the deafening roar of an iron foundry, but the evils follow necessarily enough upon the stress of the present industrial situation, and the remedies suggested in the annihilation of competition are as noxious and chimerical as can easily be imagined. The only way in which the miners' lot can be permanently improved is by improving the chances of England in the struggle for commercial existence now going on among the nations, and this desirable end is helped forward neither by strikes, nor by the inflammatory and ill-considered utterances of labour leaders.

ACCORDING to all accounts, the Pambula gold field, New South Wales, is showing considerable improvement. Better work is being done, and more men are employed, with probably a much greater output of gold than has been the case for some

years past. The *Australian Mining Standard* attributes the cause to the more *bona fide* working of the various mining properties, together with the improved methods of saving the gold by cyanide. There are still two or three mines producing, it is stated remarkably rich ore, which do not treat locally but send their ore to Sydney, where it is sold by assay, and shipped to Europe for treatment. The output of gold for 1895 will probably be the greatest since the opening of the field. The Mount Gahan is steadily working full-handed, both at mine and battery, and although latterly they have not had rich ore, yet by careful management and labour-saving appliances they have been able not only to get clear of debt and erect extra plant but also to get a reserve fund in hand. Falkner's for many months past have been taking out ore, returning 40 ounces to 50 ounces of gold from firsts, and 15 ounces to 20 ounces for seconds. They have now just put down steam pumping gear to deal with the water in the mine, and have put some 20 extra men to work, with a view to thoroughly developing the property. The Great Victory, which adjoins, have now their main shaft down about 140 feet, and are taking out very rich ore, similar to Falkner's, and out of the same lode, the last parcel going about 8 ounces per ton. At present there is a large consignment in Sydney, which is expected to give a rich yield.

THE MINING MARKET.

FRIDAY EVENING.

A comparatively uneventful week closes with small alterations in the quotation list.—A clearer outlook.

We have arrived at the close of a week that has been uneventful, so far as the Mining Market is concerned. It has been a week, however, in which a good deal has happened to restore confidence in the political outlook. The Mining Market, in common with other sections of the Stock Exchange, has been of late so much under the influence of political considerations, business having been interrupted or brought to standstill by such frequent disturbances of the public peace of mind, that it is refreshing to look round and see that one by one the clouds are disappearing from the horizon. Probably no New Year ever made so discouraging a start for the politician and the speculator as did 1896. And yet before the end of the first month is reached, the combination of adverse features has dwindled into comparative insignificance, and our diplomatic relations all over the globe have slipped back into their normal state. President Cleveland, who launched the bolt that paralysed the Stock Markets just before Christmas, has now announced that he regards the ultra-Monroe resolution of Senator Davis as "mischievous, inopportune, and unfortunate," whilst Senator Wallcott has thanked God in the Washington Senate House, that he is of the same race as the people of Great Britain. All danger of a hitch with Brazil in regard to the little island of Trinidad is over, and there need be no more argument with France over the Siamese boundary. Johannesburg is peaceful, and the German newspapers have descended from the pinnacles of jingoism, and are returning to the level of common sense and friendliness. It has been reserved for the *Pall Mall Gazette*, rapidly forcing itself upon the attention of Stock Exchange bears as one of their strongest allies, to cause a momentary spasm by the announcement of a Russo-Turkish alliance, an announcement unconfirmed and hardly taken seriously by anyone, though for the moment it served as a pretext, in conjunction with the reported illness of the Queen, to bring about a reaction in a market tending to buoyancy. We are now on the eve of the second settlement of the year. The carry over in the Mining Market will commence on Monday, and there is not likely to be any business worth speaking about in the interval. The changes in the quotation list are insignificant as compared with a week ago, but there is no disguising the fact that up to the present the public have been looking on rather than taking an active hand in the deal.

On Saturday the South African Market was in a state of stagnation, and changes, chiefly in the downward direction were unimportant. West Australians were inclined to be dull at the opening, but they hardened up as the morning advanced. Miscellaneous shares were dull, though some support was forthcoming for Indians. On Monday Kaffirs were dull and inclined to sag away, and matters were quieter in the Westralian Market, although the number of jobbers has palpably increased. Broken Hills were in demand, and Indians were a good market. On Tuesday business was on a small scale, but prices rallied towards the close in Kaffirs, whilst Westralians were uninteresting, and inclined to be easier. On Wednesday Chartered were prominently better, giving rather more cheerful tone to the African market, and a slight improvement was shown in Westralians. The tendency of both departments was distinctly good up to mid-day on Thursday, when the Russo-Turkish canard caused a general setback, nullifying the small advances scored during the earlier dealings. This morning, in sympathy with a spurt in British consols and English rails, mining prices were generally a shade harder, but the volume of business doing was so small that towards the afternoon quotations eased off.

South Africans.

Chartered still remain the index stock of the Kaffir Circus, and it is significant that on Tuesday at one time only five jobbers were to be found, representing a crowd that during the boom ran into scores, if not hundreds. The price closes $\frac{1}{2}$ higher at $3\frac{1}{2}$, the extreme fluctuations having been $3\frac{1}{2}$ and $3\frac{1}{2}$. It is suggested that at the forthcoming Settlement the bear account will have almost disappeared, owing to the fact that the now shares which were contangoed to the end of the month at the special settlement will, for the first time, be available for the adjustment of bargains. Mr. Cecil Rhodes's expected arrival in England is regarded as a bull point, his admirers having a strong belief in the power of his personality and influence. The speech delivered by Mr. Chamberlain during the week was favourably construed by the bulls of the Chartered, and some people go so far as to argue that the banishment of the leading financiers from the Transvaal would have a direct effect for the benefit of Mashonaland, as it is highly improbable that the persons in question will entirely sever their connection with the African mining industry. We gave our readers warning last week that they must not expect very much in the way of cheering news from Johannesburg, until time has elapsed to enable the bears on that side to get in. Attention may now be drawn to the inherent strength of the market, as

evidenced by the trifling effect attending the receipt of adverse news. For example, a report was in general circulation on Monday to the effect that the Simmer and Jack Mine had been shut down. On all sides diligence is shown in making the most of the possible interference with mining owing to the desertion of the Kaffir labourers. On the other hand, Messrs. Albu published a cablegram received by them the same day, giving the assurance that no labour troubles need be anticipated. The only direct result of these conflicting stories is a fall of $\frac{1}{2}$ in Consolidated Gold Fields to 9 $\frac{1}{2}$, this company being the principal holder of Simmer and Jack shares, which in their turn are only half a point down at 18, the New shares being unchanged at 5. Gold Trusts have lost $\frac{1}{2}$ at 7 $\frac{1}{2}$, and Gold Fields Deep $\frac{1}{2}$ at 7 $\frac{1}{2}$. The declines in the Barnato group are quite trifling, and in no case exceed $\frac{1}{4}$. The falls are shown in Barnato Banks at 1 $\frac{1}{2}$, Consols at 2 $\frac{1}{2}$, Buffelsdoorn at 3 $\frac{1}{2}$, Crescut at 1 $\frac{1}{2}$, Ginsberg at 1 $\frac{1}{2}$, Glencairn at 3 $\frac{1}{2}$, Johnnie Investments at 3 $\frac{1}{2}$, Langlaagte Royal at 1 $\frac{1}{2}$, May Consolidated at 2 $\frac{1}{2}$, New Primrose at 6, Rietfontein at 3 $\frac{1}{2}$, and Spes Bona at 1 $\frac{1}{2}$. Kimberley Roodepoorts at 1 $\frac{1}{2}$ are without alteration. The Robinson group is practically unaltered, Block B at 1 $\frac{1}{2}$, Langlaagte at 5 $\frac{1}{2}$, Randfontein at 2 $\frac{1}{2}$, and Robinson Banks at 6. Rand Mines have been down to 23, but were specially good to-day, putting on 1 $\frac{1}{2}$, which has left them half a point up on the week at 24 $\frac{1}{2}$. East Rands close unchanged at 5 $\frac{1}{2}$. St. Angelos are rather easier at 3 $\frac{1}{2}$ and Comets unchanged at 2 $\frac{1}{2}$. Declines of $\frac{1}{2}$ are shown in Consolidated Deep at 4 $\frac{1}{2}$, Nigel Deep at 2, Nourse Deep at 4 $\frac{1}{2}$, and Roodepoort Deep at 2 $\frac{1}{2}$. The steady-going dividend payers show very slight changes. Ferreira, at 17, are in *statu quo*, and Salisburys at 3 $\frac{1}{2}$, and Molders at 9, are $\frac{1}{2}$ higher, whilst Heriots have fallen $\frac{1}{2}$ to 9, and losses of $\frac{1}{2}$ to $\frac{1}{4}$ are seen in Citys at 4 $\frac{1}{2}$, Goldenhuus at 8, Henry Nourse at 5 $\frac{1}{2}$, Jubilee at 8 $\frac{1}{2}$, Jumpers at 7, Nigel at 4 $\frac{1}{2}$, and Wemmers at 9 $\frac{1}{2}$. Crown Reefs have lost $\frac{1}{2}$ at 9 $\frac{1}{2}$, Durban Roodepoort $\frac{1}{2}$ at 6 $\frac{1}{2}$, Meyer and Charlton $\frac{1}{2}$ at 5 $\frac{1}{2}$, and Knights $\frac{1}{2}$ at 5 $\frac{1}{2}$. The Van Ryn group is weaker all round. Van Ryns have lost $\frac{1}{2}$ at 5 $\frac{1}{2}$, Norths $\frac{1}{2}$ at 1 $\frac{1}{2}$, West $\frac{1}{2}$ at 3 $\frac{1}{2}$, New Africans $\frac{1}{2}$ at 3 $\frac{1}{2}$, and Austral Africans $\frac{1}{2}$ at 1 $\frac{1}{2}$. A fair business has been done in Klerksdorp which are finally 6 $\frac{1}{2}$ lower at 13s. 6d. Anglo-French Exploration have fallen $\frac{1}{2}$ to 3 $\frac{1}{2}$, Adler's Consols $\frac{1}{2}$ to 3, Henderson's $\frac{1}{2}$ to 2 $\frac{1}{2}$, Pardy's Mozambique $\frac{1}{2}$ to 1 $\frac{1}{2}$, and Bechuanaland $\frac{1}{2}$ to 1 $\frac{1}{2}$. Transvaal Gold is $\frac{1}{2}$ down at 5, and the Lydenburg group is generally rather easier, Spitzkoppe having receded to 15s., Lisbons to 5s. 3d., and Balkis to 6s. 6d. Quite the strongest share in the market has been De Baars, which closes over a point to the good at 23 $\frac{1}{2}$ x.d. Jaggers are maintained at 8 $\frac{1}{2}$. Gordons are rather better at 5s. 9d., and St. Augustines 6d. lower at 8s. 3d.

West Australians.

Although the market has widened considerably, owing to the migration of numerous jobbers from the Kaffir Circus, there has been far less business doing this week in West Australians. Nevertheless, under all the circumstances, prices have been wonderfully well maintained. Encouraging accounts are received from day to day from the other side, and there is said to be a strong demand for shares on Coolgardie account. The Menzies group commanded special attention in the middle of the week, partly owing to purchases by clients of the West Australian Cable Agency, who were also supporting Golden Harrow, Hainault, Burbanks, Hawk's View, and other properties. Menzies Reefs are finally $\frac{1}{2}$ lower at 1 $\frac{1}{2}$, but last week's quotations are maintained in the case of Menzies Consols at 1 $\frac{1}{2}$, Gold Estates at 1 $\frac{1}{2}$, and Mining and Exploration at 1 $\frac{1}{2}$. In the Hannan's Group the most important relapse is $\frac{1}{2}$ in Hannan's R-ward, at 3 $\frac{1}{2}$. Hannan's 100 Acre are rather better at 1, and Napier are $\frac{1}{2}$ up at 1 $\frac{1}{2}$. The Great Boulder crushing announced on Tuesday, 1300 ounces from 252 tons, failed to have a favourable effect, and the shares have been down to 5 $\frac{1}{2}$. They close better to-night at 5 $\frac{1}{2}$, which is $\frac{1}{2}$ lower than last week. A big business has been done in Hannan's Proprietary, which closed $\frac{1}{2}$ lower at 1 $\frac{1}{2}$ premium. Associated were rather dull to-day, losing $\frac{1}{2}$ at 1 $\frac{1}{2}$. The shareholders in each of the two last-named companies are to be addressed next week by Mr. Gray, the resident manager, who is expected to give some encouraging particulars of the respective properties. True Blues are $\frac{1}{2}$ down at 2, whilst others in this group are practically unchanged. Iron Kings shows an exceptional improvement at 1 $\frac{1}{2}$. A comparatively low-priced share in the Hannan's district is Hannan's North, now selling at 1 $\frac{1}{2}$. Dealings are for Special Settlement, which will probably take place in the middle of February. The property is bounded on the north by the Eureka, on which 9 ounce stone has been crushed, and the reef is traced though to this property showing 4 ounces to the ton at 90 feet. Cassidy Hill has put on $\frac{1}{2}$ at 1 $\frac{1}{2}$, whilst small declines are shown in Blackett's at 10s. 6d., Clyde Gold at 1 $\frac{1}{2}$, Fingall's Reef at 1 $\frac{1}{2}$, Golden Crown at 1 $\frac{1}{2}$, Golden Plum at 1 $\frac{1}{2}$, Kinsella at 1 $\frac{1}{2}$, Lady Loch at 2 $\frac{1}{2}$, Lady Shenton at 2 $\frac{1}{2}$, Londonderry at 7 $\frac{1}{2}$, and White Feather at 2 $\frac{1}{2}$. Big Blow has improved $\frac{1}{2}$ to 1 $\frac{1}{2}$. Extensive dealings have taken place in Hampton Plains which are finally $\frac{1}{2}$ lower at 4 $\frac{1}{2}$. Mainland Consols went over 3 in the earlier part of the week, but close sellers at that figure. Paddington Consols are $\frac{1}{2}$ better at 1 $\frac{1}{2}$. In the Finance Group, Colonials are $\frac{1}{2}$ down at 5 premium, London and Globe have lost $\frac{1}{2}$ at 2 $\frac{1}{2}$, W.A. Exploring and Finance $\frac{1}{2}$ at 3 $\frac{1}{2}$, and Share Corporation $\frac{1}{2}$ at 3 $\frac{1}{2}$. West Australian Mining shares are the turn harder at 8s. 9d., and are spoken of as likely to improve. The working capital of the company is £54,000, and of the various properties owned, which have been selected by the Government Inspector of lands, seven are earning profits from crushing. Sherlaw's Gold have advanced 2s. 6d. to 13s. on a series of continuously favourable reports from the mine. The crushing machinery is expected to commence working next week. Murdoch Gold Fields are worth holding in view of the generally expected improvement in this market. The shares are about 7 $\frac{1}{2}$.

Miscellaneous.

A large business has been done in Broken Hill Proprietary which close $\frac{1}{2}$ down on balance at 2 $\frac{1}{2}$ x.d. It is noticeable, however, that the quotation in Melbourne has all along been appreciably higher than that ruling in London. British are finally quoted at 1 $\frac{1}{2}$ s. There has been some little excitement in Golden Feathers which mark a gain of 2s. 9d. at 9s. 3d. on a change in the management. Cripple Creek Gold are $\frac{1}{2}$ higher at 1 $\frac{1}{2}$ and the Exploration unchanged at 3 $\frac{1}{2}$. Wentworths are $\frac{1}{2}$ down at 1, but Aladins are maintained at 1 $\frac{1}{2}$. The announcement of a 30 per cent scrip dividend did not at all please holders of North Queensland Mining Agency, who promptly offered the shares down 10s. to 1. In Copper shares gains of $\frac{1}{2}$ are shown in Tintos at 16 $\frac{1}{2}$, and Tharsis at 4 $\frac{1}{2}$ whilst Capes are $\frac{1}{2}$ up at 2 $\frac{1}{2}$. Indian gold shares have been fairly active, but finally the only changes are losses of 1-1 $\frac{1}{2}$ in Ooregum at 2 $\frac{1}{2}$ and Gold Fields of Mysore at 20s. 6d. Charnion Reefs are firm at 5 $\frac{1}{2}$ x.d., and Nundydroogs at 2 $\frac{1}{2}$. The New Zealand group has been well maintained. Waihi closing at 5 $\frac{1}{2}$, Silverton at 3, and Waitekauri at 3 $\frac{1}{2}$. In the Charters Towers group it is noticeable that prices on this side are lower than those ruling in the Colony.

Brilliants, for instance, are not much better than 14s. here, whilst on the other side there are buyers at 18s. Mosmans have improved 1s. 6d. to 5s., but Brilliant Blocks have fallen $\frac{1}{2}$ to 1 $\frac{1}{2}$.

STOCK EXCHANGE SETTLING DAYS.

Settling Days on the Stock Exchange are as follows:—

CONSOLS.—Monday, February 3.

STOCKS AND SHARES.

JANUARY.

Ticket Days. Account Days.

Wednesday, January 29 | Thursday, January 30

FEBRUARY.

Wednesday, February 12 | Thursday, February 13

Wednesday, February 26 | Thursday, February 27

Contango Days for Mining Market:—

Monday, January 27 | Monday, February 10

Monday, February 24

NEW ISSUES.

THE VICTORIA REEF GOLD MINE (LIMITED).

This company, which seems to possess all the potentialities of success and prosperity, is floated with a capital of £75,000. It is formed for the purpose of acquiring lease No. 214, situate about 10 miles west of Mount Jackson, in the Yilgarn Gold Fields, West Australia, containing about 17 acres or thereabouts, and known as the Victoria Gold Mines. Most favourable reports have been written upon the property by experts, which go to show that considerable development work has already been done, that the lodes are of exceptional richness and extent, and that there is an abundance of wood and water. A sample assay, taken by Mr. W. H. Nicholas, M.E., manager of Fraser's Gold Mining Company, gave a return of 8 ounces 12 dwts. 6 grains. This expert also states that the ore is very tractable and easily treated, and bears every indication of its highly auriferous state. He recommends its purchase with confidence. Other favourable reports have been made by Messrs. D. Chambers, J. George, C. H. Yeo, and J. R. Filewood. Messrs. Chambers and George state that after giving the mine a thorough inspection they "found that the reef had been traced a distance of 5 chains (about) and that the prospectors had sunk three shafts on it, the deepest one being 70 feet; that at that depth the reef was over 4 feet wide, and had an underlay of about 7 feet. The stone showed gold all over the face, and we broke away a bag of stone and brought it down for your inspection. At the several points sunk on, gold is freely visible in the stone broken away. The reef at surface is 2 feet 6 inches wide, but at the 70 feet it has made to 4 feet or over, showing that it is improving as it goes down. There are some 70 or 80 tons of stone at grass, and there are about 5000 tons in sight." It will be noticed that the company is moderately capitalised, and that it has a practical and influential directorate.

LADY EMILY GOLD MINING COMPANY (LIMITED).

This company likewise appears to possess abundant promise. The capital is also a small one—viz., £75,000—in shares of £1 each. It has been formed to acquire, further develop, and work the Emily Mine, situate about 2 miles south-east of the township of Coolgardie. The property is held under gold mining lease No. 532 of the Coolgardie gold field, and consists of 13 acres. The lease is granted direct from the Government of Western Australia. According to the prospectus, "the ore exposed in these workings is estimated at a mill value of at least 3 ounces to the ton. In sinking the shaft a very rich shoot was passed through at a depth of 32 feet, and there is every indication, as proved by the sinking of shafts on this reef, on the Lady Loch, and on others in the immediate vicinity, that the reef will increase in size and richness as greater depth is attained. In the adjoining Regina lease a shaft has been sunk near the southern boundary to a depth of 189 feet. This shaft is 5 feet thick, with ore of the estimated milling value of 4 ounces to the ton. The course of this reef is towards this company's ground, and on December 18, 1895, the following cable was sent to Mr. Robert James, M.E.:—'Does Regina reef run into Emily lease, and is it the same as reef Emily shaft?' Mr. James replied by cable dated Coolgardie Jan. 2, 1896, as follows:—'Emily the same in every respect Regina.' The Emily reef alone would amply justify the expenditure of capital in developing the property, with the prospects of most satisfactory results, but in addition there is good reason for believing that the celebrated Lady Loch reef will be found to run through the Lady Emily Company's ground."

GEIPEL'S STEAM TRAP.—We have received from the Shillingford Works Company (Limited), of Wallingford, Berks., a copy of their new price list for 1896. They inform us that during the past year their business in these traps has rapidly increased, and that they are now turning out at the rate of 2000 traps per annum. It is claimed that this trap is especially suitable for central stations, or for other places where a number of traps are desirable. There is no doubt that the practice of connecting a number of drains to a common steam trap considerably increases the radiating surface of the pipes, and, therefore, it is wasteful, especially as these connecting pipes are generally uncovered. Taking the data given by Mr. Geipel in his remarks upon Mr. Burstell's recent paper on the "Electric Lighting of Edinburgh,"—viz., that each square foot of bare pipe in surface with 150 lbs. steam pressure condenses as much steam as requires $\frac{1}{2}$ ton of coal per annum, if in continual use, then as little as 4 feet of 2 inch diameter pipe, uncovered, waste 1 ton of coal per annum. From this it is evident that a considerable amount of coal is lost below the floors of those engine rooms where a common steam trap is used. Other objections to this practice are—the increased number of high pressure joints; the fact that a hand valve must be used at each connection to the main steam pipe or otherwise, which must be attended to on starting up or shutting down; and the non-return valve, which it is generally necessary to have at each connection, to prevent a backrush of steam into an idle section of the main steam pipe from the common drain pipe, which is always under pressure. The makers, therefore, recommend the use of a separate trap at each drain connection, and that, in addition to draining well the main steam pipes, there should be a trap on each cylinder jacket and on each receiver of the engines, as is now the practice adopted by the most advanced marine and other engine builders. It is claimed that the Geipel team trap under these circumstances is the most suitable trap in the market, not only owing to its small cost, but also to its superiority, especially in connection with high pressure steam. None of the working parts are in contact with the steam or water; the valve is removable without breaking any steam joints: the trap works in any position and takes up an exceptionally small amount of space, while there are no floats or levers to get out of order. During December the orders exceeded 200 traps, one order alone being for 108 traps. We observe amongst others that Professor Kennedy, Mr. A. E. Seaton, Mr. T. Mudd, Messrs. Babcock and Wilcox, and the engineers of several important electricity supply stations, testify to the excellent working of this trap.

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, JANUARY 24.

Copper.

THE speculative market has been stiffened somewhat this week, partly by speculative buying and partly in connection with Stock Exchange manipulations, and the value of G.M.B.'s improved d. as a result, to the extent of over 10s. per ton. Over 1000 tons changed hands on Monday at £10 2s. 6d. to £11 1s. 3d. s.c. and £11 3s. 9d. to £11 8s. 9d. three months. On Tuesday the market was less active, but values advanced to £11 5s. 3d. and £11 12s. 9d. respectively. Wednesday's market was rather irregular, sharp cash declining to £11 3s. 9d., whilst three months touched £11 15s. Yesterday the latter price, and £11 12s. 9d., were again done for forward and £11 5s. 3d. for spot, and up to day after business at £11 7s. 6d. and £11 8s. 9d. and £11 12s. 9d. to £11 16s. 3d., respectively. Consumption has been distinctly better this week, and has resulted in good business, especially in refined sorts.

Tin.

Has been an unsteady market this week, the value being swayed in one direction or the other according as buyers or sellers predominated. The opening on Monday was at £9 10s. s.c., 8 rails at £30 2s. 6d. three months. A decline to £9 5s. and £9 17s. 6d. respectively was followed by a gradual advance to £9 11s. 3d. s.c., an £10 5s. three months a fair volume of business taking place daily. Yesterday and to-day the tendency has again been downward, spot touching £9 1s. 3d. and three months £9 15s. The close is dull at £9 2s. 6d. s.c. and £9 17s. 6d. three months. On Tuesday the quotations were 38 $\frac{1}{2}$ fl. and 38 $\frac{1}{2}$ fl., and Friday 38 fl. and 38 $\frac{1}{2}$ fl., with Banks at 38 $\frac{1}{2}$ fl.

Pig Iron.

Last week's shipments from Scotland are given as about 4100 tons, or 700 tons less than for the parallel week of last year. The week began in Glasgow with a drop of 2s. to 4s. 11d. s.c. Sooton, which has since advanced to 4s. 7d., the close being flat at 4s. 1 $\frac{1}{2}$ d. Hambleton is quoted at 3s. 2 $\frac{1}{2}$ d. and Middlesbrough at 3s. 2 $\frac{1}{2}$ d.

Lead.

Keeps steady, and closes at £11 1s. 3d. to £11 2s. 6d. soft foreign, and £11 3s. 9d. to £11 5s. English.

Spoiler.

has improved considerably in tone and price, owing to a better enquiry, and we close steady at £14 2s. 6d. to £14 5s. ordinary, and £11 5s. to £11 7s. 6d. specials.

Antimony.

is unaltered at £30, and demand is very quiet.

Quicksilver.

Firsts are steady at £7 7s. 6d., and seconds at £7 5s.

The following are to-night's (January 24) prices of metals:—

	Copper.	£ s. d.
Tough cake and Ingot	11 15 0
Best selected	45 10 0
Electrolytic Copper	45 5 0
Sheets and sheathing	51 10 0
Flat bottoms	54 13 0
Chill bars	... spot, & 3 months respectively	41 13 0
Good merchantable	41 16 3
Copper tubes, seamless	

"THE MINING JOURNAL" SHARE LIST.

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*Ay.*, Antimony; *A.*, Arsenic; *Bz.*, Borax; *C.*, Copper; *D.*, Diamond; *G.*, Gold; *I.*, Iron; *L.*, Lead; *M.*, Manganese; *N.*, Nitrates; *P.*, Phosphates; *Q.*, Quicksilver; *R.*, Ruby; *S.*, Silver; *S-L.*, Silver-lead; *Sul.*, Sulphur; *T.*, Tin; and *Z.*, Zinc. In the "Amount of Share" column of British Mines signifies that the mine is conducted on "Cost Book" principles; *J.* in the "Head Office" column of African Mines signifies that the address given is not that of the head office, but of a sub, or transfer office; and *t*, following the names of African Mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share Dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that, while our Share List will almost invariably be found correct, we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

AFRICAN MINES.

Name.	Closing Price, Jan. 24, 1896	Closing Price, Jan. 17, 1896	No. of Shares	When last XD and Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
Abercorn Reef ...G	-/5 1/	-/5 1/	5/	—	1/0 0	—	Millwood	16, Tokenhouse Yard
Abbott's Con. Reefs	14 3/4	14 3/4	1 C	—	1/0 0	—	De Kasp	2 Old Street, Avenue.
Alders Consolidated	15 1/2 15 1/2	15 1/2 15 1/2	1 C	—	1/0 0	257,000	Mozausbq.	1, Moorgate place.
Afri. an Alluvial...	1 1/4 1 1/4	1 1/4 1 1/4	1 C	—	1/0 0	130,000	—	11, Poultry.
" Cosi.	5/6 6/6	5/6 6/6	1 C	—	1/0 0	—	—	—
" Estates ...	5/7 5/7	5/7 5/7	1 C	—	1/0 0	230,000	Mossel Bay	9, St. Swithin's-lane
" Consol'dt ...	3/4 4/4	3/4 4/4	1 C	—	1/0 0	448,000	Middleburg	10, Cophall-buildings
" Gold Con. ...	3/2 3/2	3/2 3/2	10	5% Mar. '95	1/0 0	300,000	Transvaal	11, College Hill.
" Gold Ryen.	14 1/4	14 1/4	1 C	rte Oct. 30 '95	1/0 0	17,000	Transvaal	5, Old Broad-street.
Aitkenhead ...G	1 1/4 1 1/4	1 1/4 1 1/4	1 C	rte Oct. 30 '95	1/0 0	40,000	St. Winchester House	17, Winchester House.
Aigues Houe ...G	5/6 5/6	5/6 5/6	1 C	—	1/0 0	225,000	Winchester House	18, Cophall-buildings
Alexander Estate G	3 1/2 3 1/2	3 1/2 3 1/2	1 C	—	1/0 0	3,000	Oceana	19, Tokenhouse-yard
Anglo French Exp	3 1/2 3 1/2	3 1/2 3 1/2	5 C	15% Aug 29 '95	1/0 0	1,000	Oceana	20, College Hill.
" Matalebele ...G	1 1/2 2 1/2	1 1/2 2 1/2	1 C	—	1/0 0	—	Transvaal	21, Old Broad-street.
Apparition ...G	—	—	1 C	—	1/0 0	—	St. Winchester House	22, Bishopsgate st.
Aurora ...G	1 1/4 1 1/4	1 1/4 1 1/4	1 C	—	1/0 0	55,000	West Coast	23, College Hill.
" West United	1 1/4 1 1/4	1 1/4 1 1/4	1 C	3/ Dec. 16 '95	1/0 0	100,000	West Coast	24, Old Broad-street.
Austral African ...	1 1/2 3 3/2	1 1/2 3 3/2	1 C	—	1/0 0	25,000	West Coast	25, Old Broad-street.
Balisie Erating G	6/3 6/3	7/3 7/3	1 C	—	1/0 0	52,000	West Coast	26, Old Broad-street.
" Lad-a	2 2/4	2 2/4	1 C	—	1/0 0	158,750	West Coast	27, Old Broad-street.
Balmoral M. R. ...G	7/8 8/8	7/8 8/8	1 C	—	1/0 0	200,000	West Coast	28, Old Broad-street.
Banket ...G	2 2/4 2 2/4	2 2/4 2 2/4	1 C	—	1/0 0	83,000	West Coast	29, Old Broad-street.
Barnato Bank ...	1 1/2 1 1/2	1 1/2 1 1/2	1 C	rte Sep 24 '95	1/0 0	—	West Coast	30, Old Broad-street.
Consort ...G	2 2/4 2 2/4	2 2/4 2 2/4	1 C	—	1/0 0	1,110,000	West Coast	31, Old Broad-street.
Barrett ...G	8/3 8/3	9/3 10/10	10	rte Jy 24 '95	1/0 0	407,000	West Coast	32, Old Broad-street.
Buchananland Exp	15 1/2 15 1/2	15 1/2 15 1/2	1 C	5 pc Jan 16, '96	1/0 0	400,000	West Coast	33, Old Broad-street.
" Lad-a G Soc.	15 1/2 15 1/2	15 1/2 15 1/2	1 C	—	1/0 0	100,000	West Coast	34, Old Broad-street.
Ben Fravato ...	2 2/4 2 2/4	2 2/4 2 2/4	1 C	—	1/0 0	—	West Coast	35, Old Broad-street.
Big Golden Quarry Block "B" Lang.	19 1/2 19 1/2	19 1/2 19 1/2	1 C	—	1/0 0	483,328	West Coast	36, Old Broad-street.
Bonanza ...	2 2/4 2 2/4	2 2/4 2 2/4	1 C	—	1/0 0	518,500	West Coast	37, Old Broad-street.
Brit. S. A. Char. ...G	2 2/4 2 2/4	2 2/4 2 2/4	1 C	16 - Nv. 28 '95	1/0 0	2,000	West Coast	38, Old Broad-street.
Buffelsfontein ...G	15 1/2 15 1/2	15 1/2 15 1/2	1 C	—	1/0 0	250,000	West Coast	39, Old Broad-street.
" Central ...G	15 1/2 15 1/2	15 1/2 15 1/2	1 C	—	1/0 0	—	West Coast	40, Old Broad-street.
Bulawayo Synd. ...G	1 1/2 1 1/2	1 1/2 1 1/2	1 C	5s Nov 28 '95	1/0 0	115,550	West Coast	41, Old Broad-street.
Cape Asbestos ...	2 2/4 2 2/4	2 2/4 2 2/4	1 C	—	1/0 0	30,311	West Coast	42, Old Broad-street.
" Copper ...G	2 2/4 2 2/4	2 2/4 2 2/4	1 C	2/ Dec. 16 '95	1/0 0	30,000	West Coast	43, Old Broad-street.
" 6% Pref. ...G	2 2/4 2 2/4	2 2/4 2 2/4	1 C	2/ Dec. 16 '95	1/0 0	45,000	West Coast	44, Old Broad-street.
Cassel Coal ...	1 1/2 1 1/2	1 1/2 1 1/2	1 C	10pc July 1 '95	1/0 0	75,000	West Coast	45, Old Broad-street.
Cen. de Kasp ...	1 1/2 1 1/2	1 1/2 1 1/2	1 C	—	1/0 0	—	West Coast	46, Old Broad-street.
" Montrose ...G	2 2/4 2 2/4	2 2/4 2 2/4	1 C	—	1/0 0	69,000	West Coast	47, Old Broad-street.
" Roodep't Deep	1 1/2 1 1/2	1 1/2 1 1/2	1 C	4/ - Jan. 31 '95	1/0 0	111,016	West Coast	48, Old Broad-street.
Champ d'Or ...G	2 2/4 2 2/4	2 2/4 2 2/4	1 C	—	1/0 0	150,000	West Coast	49, Old Broad-street.
Charterland G.F. ...	1 1/2 1 1/2	1 1/2 1 1/2	1 C	—	1/0 0	—	West Coast	50, Old Broad-street.
Chimes West ...	1 1/2 1 1/2	1 1/2 1 1/2	1 C	—	1/0 0	150,000	West Coast	51, Old Broad-street.
City and Sub. N.W.G	1 1/2 1 1/2	1 1/2 1 1/2	1 C	—	1/0 0	—	West Coast	52, Old Broad-street.
Coekseestroom ...G	5/6 5/6	5/6 5/6	1 C	—	1/0 0	140,000	West Coast	53, Old Broad-street.
Con. Buttfontein D	30/31 29/30	29/30 30/30	1 C	9d, Jan. 16 '96	1/0 0	721,500	West Coast	54, Old Broad-street.
Con. Deep Levels G	4 1/4 4 1/4	4 1/4 4 1/4	1 C	4/ - Jy 11 '95	1/0 0	187,250	West Coast	55, Old Broad-street.
Con. G. Fields S.A.	9/4 10	10/4 10/4	1 C	2/ Nov. 14 '95	1/0 0	1,243,950	West Coast	56, Old Broad-street.
Do. 6% Pref. ...G	22 23	22 23	2 2/4	2/ Dec. 16 '95	1/0 0	—	West Coast	57, Old Broad-street.
Do. 5% Debts ...G	105/107 107	108/110	5 C	5s J. in 2 '96	1/0 0	5,000,000	West Coast	58, Old Broad-street.
Driefonteinstein ...G	5 6	6 6	6 6	—	1/0 0	—	West Coast	59, Old Broad-street.
Durban Roodept. G	3 1/2 3 1/2	3 1/2 3 1/2	1 C	3/ - Dec. 16 '95	1/0 0	125,000	West Coast	60, Old Broad-street.
Deep ...G	3 1/2 3 1/2	3 1/2 3 1/2	1 C	—	1/0 0	30,000	West Coast	61, Old Broad-street.
Eagle's Nest ...G	3 1/2 3 1/2	3 1/2 3 1/2	1 C	1/0 0	123,000	West Coast	62, Old Broad-street.	
Eastleigh ...G	3 1/2 3 1/2	3 1/2 3 1/2	1 C	5s Jan. 8 '96	1/0 0	789,791	West Coast	63, Old Broad-street.
East Orion ...G	5/6 5/6	5/6 5/6	1 C	—	1/0 0	240,000	West Coast	64, Old Broad-street.
" Rand ...G	5/6 5/6	5/6 5/6	1 C	—	1/0 0	275,000	West Coast	65, Old Broad-street.
Eselyn ...G	2 2/4 2 2/4	2 2/4 2 2/4	1 C	—	1/0 0	57,000	West Coast	66, Old Broad-street.
Exploration ...G	1 1/2 1 1/2	1 1/2 1 1/2	1 C	10% Jan. '95	1/0 0	65,000	West Coast	67, Old Broad-street.
Exploring L & M ...G	15 1/2 15 1/2	15 1/2 15 1/2	1 C	1/0 0	143,000	West Coast	68, Old Broad-street.	
Ferreira ...G	16 1/2 17 1/2	16 1/2 17 1/2	1 C	2/ Dec. 16 '95	1/0 0	215,215	West Coast	69, Old Broad-street.
Forbes Reef (N.W.G)	3/4 3/4	3/4 3/4	1 C	—	1/0 0	45,000	West Coast	70, Old Broad-street.
Geldenhuus Deep G	6 6/6	8 8/8	1 C	—	1/0 0	250,000	West Coast	71, Old Broad-street.
Geldenhuus Est. ...G	3 1/2 3 1/2	4 4/4	1 C	6/ - Jy 26 '95	1/0 0	285,000	West Coast	72, Old Broad-street.
George Goch ...G	15 1/2 15 1/2	15 1/2 15 1/2	1 C	10% Dec. 95	1/0 0	187,500	West Coast	73, Old Broad-street.
Ginsberg New ...G	15 1/2 15 1/2	15 1/2 15 1/2	1 C	—	1/0 0	150,000	West Coast	74, Old Broad-street.
Glencairn ...G	11/12 12/12	12/12 12/12	1 C	12/4 2 Dec. '95	1/0 0	200,000	West Coast	75, Old Broad-street.
Gold Coast Devl. ...G	7/8 7/8	7/8 7/8	1 C	12/4 2 Dec. '95	1/0 0	130,000	West Coast	76, Old Broad-street.
Estate T. ...G	3/4 3/4	3/4 3/4	1 C	15% Dec. '95	1/0 0	60,000	West Coast	77, Old Broad-street.
G. F. of Lydenb'g	7/8 7/8	7/8 7/8						

"THE MINING JOURNAL" SHARE LIST—(Continued)

AUSTRALIAN AND NEW ZEALAND MINES.

AUSTRALIAN AND NEW ZEALAND MINES—(Continued).

Name.	Closing Price, Jan. 24, 1896	Closing Price, Jan. 17, 1896.	Amt. of Share	When last XD and Dividend.	Called up per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
Abbott's 2/8pm.pd.G	3/4	3/4	21 0	—	£15 0	67,000	M. rehison	17, Old Broad st.
Achilles Gld Fld.	1/6 2/	1/6 2/6	2/6	—	2/6	642,456	N.Zealand	11, Poultry.
Aldindine Lamp G	1/4 1/6	1/4 1/6	1 0	3/ Dec 16 '95	1 000	100,000	N.S.Wales	4-6, Throg. Avenue.
Anglo-French Exp.	1/4 1/4	1/4 1/4	1 0	5/- Oct 30 '95	1 000	—	W. Austral.	72, Queen Street.
Arrow Brownhill G	3/4 7/8	3/4 1/4	1 0	5/ Oct 29 '95	1 000	99,000	—	—
Assoc. Gold Mine	1/8 1/8	1/8 1/8	1 0	—	1 000	80,000	—	—
Anglo-Ger. Explor.	1/4 1/4	1/4 1/4	1 0	—	1 000	375,000	Coolgardie	—
Arrow Brownhill G	3/4 7/8	3/4 1/4	1 0	—	1 000	68,000	Murchison	20, Bucklersbury.
Arrow Brownhill G	3/4 7/8	3/4 1/4	1 0	-/4 Dec 28 '94	1 000	210,000	Queenslnd	23, College hill, E.C.
Austin. G	3/4 5/8	3/4 1/4	1 0	-/8 Mar. '92	1 000	18,315	S. Austral.	8, Queen-st. place
Australasian ....G	2/8 3/6	3/0 1/4	1 0	-/9 Aug. '95	7 7 8	522,708	N.S.Wales	15, Old Jewry Clbres.
Australian ....C	—	—	20	-/8 Sep. '95	1 000	52,000	W. Austral.	Dashwood House.
Aus. Bro. Hill Con.	1/3 1/9	1/3 1/9	1 0	1/- June '91	1 000	52,708	—	Hillgrove, N.S.Wales.
Baker's Creek ...G	3/4 3/4	3/4 3/4	1 0	1/- May '95	1 000	480,000	Coolgardie	43, Threadneedle st.
Bardoc. G	3/4 1	3/4 1	1 0	-/4 Dec. '94	1 000	145,000	—	F'by. H. Bl'm'd St.
Bayley's Reward G	5/8 6/8	5/8 6/8	1 0	—	1 000	55,000	—	15, Cannon Street.
Big Blow ...G	3/4 3/4	3/4 3/4	1 0	—	1 000	140,000	—	16, St. Helen's Place.
Blackett's Claim G	3/4 3/4	3/4 3/4	1 0	—	1 000	—	—	1, Metal Exch. Bidgs.
Black Flag....G	1/8 1/8	1/8 1/8	1 0	—	1 000	—	—	Dashwood House.
Bladnoch Freshfield G	2/5 3/	2/9 3/3	1 0	—	1 000	120,000	—	Ack. N.Z
Bound Dundee G	7/7 8/	7/8 8/6	1 0	-/4 Nov 28 '92	2 000	250,000	N.Zealand	8, St. Helen's Place
Brilliant .....G	1/8 1/8	1/8 1/8	2 0	-/4 Nov 28 '92	2 000	70,000	Queenslnd	Charters Towers.
Block. ....G	1/8 1/8	1/8 1/8	1 0	-/6 Dec 16 '95	1 000	—	—	5, Helen's Place
St. Geo. ....G	1/8 2	1/8 2	1 0	1/- Nov 12 '95	1 000	72,000	—	Charters Towers.
Brit. Brook. Hill S	1/8 1/8	1/8 1/8	1 0	—	1 000	240,000	N.S.Wales	Dashwood House, E.C.
British United..G	3/4 3/4	3/4 1	0	—	1 000	—	—	57, Moorgate St. rest.
Broad Arrow G	2/5 3/	3/7 3/6	5/8	1/- Jan. 6 '98	1 000	960,000	N.S.Wales	4, Gt. Winchester st.
Brock's Hill Prop. ....G	2/10 1/10	2/6 3/	8/	—	1 000	120,000	—	53, Coleman Street.
Brookman Bros. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	—	—	4. Gt. Winchester st.
Brownhill Procty. ....G	7/8 1	1/8 1/8	1 0	—	1 000	—	—	4, Gt. Winchester st.
Caledonian ....G	1/8 2/6	1/8 2/6	1 0	—	—	120,000	W. Austral.	—
Carrington. ....G	2/3	2/3	12/8	—	1 000	100,007	Queenslnd	9, Tokenhouse Yard.
Cashmire Bril. ....G	3/4 3/4	3/4 3/4	1 0	—	1 000	55,128	Coolgardie	20, Bucklersbury.
Cassidy Hill G	1/8 1/8	1/8 1/8	1 0	—	1 000	15,000	W. Austral.	23, College hill, E.C.
Centraloulder G	3/4 7/8	3/4 3/4	1 0	—	1 000	100,000	—	8, Queen-st. place
Exp. of W.A. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	122,000	—	15, Old Jewry Clbres.
Chaffers. ....G	4/6 5/	4/6 4/6	4/	—	—	300,000	—	10, Cannon Street.
Charters Tow. ....G	3/8	3/8	3/8	10/	—	9,000	—	54, Old Broad-st., E.C.
Consolid. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	300,000	—	110, Cannon Street.
Colonial Finance. ....G	1/8 1/8pm	1/8 1/8pm	1 0	—	1 000	—	W. Austral.	110, " "
Gold Fields G	1/8 1/8pm	1/8 1/8pm	1 0	—	1 000	—	—	139, " "
Gon. G. M. of W. A. ....G	3/4 3/4	3/4 3/4	1 0	—	1 000	90,000	—	Harquahala... G
Murchison. ....G	2/8 11/16	2/8 11/16	1 0	—	1 000	250,000	—	8, 7/ 7/
Consuelo. ....G	3/4 3/4	3/4 3/4	1 0	—	1 000	150,000	—	1/ 1/ 6/
Conti. & W.A. Trust. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	150,000	—	5, Helen's Place
Coolgardie Gold. ....G	1/8 1/8	1/8 1/8	1 0	1/- Oct 16 '95	1 000	100,000	—	7/ 6/ 5/ 6/
Mining G	1/8 1/8	1/8 1/8	1 0	—	1 000	40,000	—	1/ 6/ 1/ 5/
Mint & L.K.G. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	150,000	—	1/ 6/ 1/ 5/
Graven' Cal. ....G	1/8 1/8	1/8 1/8	1 0	-/3 June '94	1 000	100,000	—	30, Moorgate Street.
Crown Bayley's. ....G	1/8 1/8pm	1/8 1/8pm	1 0	—	1 000	80,000	—	Broad Street House.
United. ....G	1/8 1/8pm	1/8 1/8pm	1 0	—	1 000	75,000	—	11, Poultry, E.O.
Cumbrind (New)G	7/8 10	7/8 10	1 0	—	1 000	184,800	—	12, Dashwood House.
Day Dawn B. & W.G	9/3 9/9	8/8 9/	1 0	-/8 Nov. 14 '95	1 000	498,400	—	11, Poultry, E.O.
" F. C. G	2/9 2/3	2/3 3/6	1 0	-/8 Apr. '92	1 000	490,000	—	12, Dashwood House.
Eaglehawk. ....G	1/8 2/8	1/8 2/8	1 0	—	1 000	120,000	Victoria. ....G	30-31, St. Swithin's In
Emerald. ....G	3/4 3/4	3/4 3/4	1 0	—	1 000	55,000	—	4, Poultry.
Emperor. ....G	3/4 3/4	3/4 3/4	1 0	—	1 000	65,000	—	11, Cannon-st. place
Empress Coolge. ....G	3/4 3/4	3/4 3/4	1 0	—	1 000	90,000	—	12, Cannon-st. place
Explorers Synd. ....G	3/4 3/4 pm	3/4 3/4 pm	1 0	—	1 000	8,000	W. Austral.	—
Fingall Mts. Ext'd. ....G	3/4 3/4	3/4 1	1 0	1/4 Jan. 16 '96	1 000	160,000	—	4, Sun Court
Florence. ....G	1/8 2/3	2/2 2/3	1 0	—	1 000	60,000	—	18, St. Swithin's In
Gem of Cue. ....G	3/8 4/6	3/6 4/6	5/	—	1 000	45,000	W. Austral.	5, Queen-st. place
Gibraltar Cons. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	200,000	—	43, Threadneedle st.
Gladiator. ....G	3/4 3/4	3/4 3/4	1 0	—	1 000	—	—	3-5, Queen-st. E.C.
Glenrock. ....G	1/8 2/3	1/8 2/3	1 0	—	1 000	225,000	W. Austral.	75, Queen Street, E.C.
Golconde. ....G	3/4 7/8	3/4 7/8	1 0	—	1 000	68,086	—	77, Bishopsgate st.
Golden Cement G	3/4 7/8pm	3/4 7/8pm	1 0	—	1 000	100,000	W. Austral.	79, Queen Street, E.C.
Golden Crown. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	100,000	—	79, Bishopsgate st.
Gate. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	150,000	—	81, Bishopsgate st.
Horse Shoe. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	150,000	—	83, Bishopsgate st.
Link. ....G	1/8 1/8	1/8 1/8	1 0	-/5 Oct 30 '95	1 000	90,000	—	85, Bishopsgate st.
Plum. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	120,000	—	87, Bishopsgate st.
Gold Estates. ....G	2/3 3	2/3 2/3	1 0	3/ Dec 30 '95	1 000	60,000	Yilgarn. ....G	1/ 6/ 1/ 5/
Great Boulder. ....G	3/4 5/6	6/6 5/6	1 0	2/- Dec 16 '95	1 000	240,000	Kurnalpi. ....G	1/ 6/ 1/ 5/
" " Junction. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	—	—	13-14, Abchurch st.
" " M. R. 's. ....G	1/8 1/8	1/8 1/8	1 0	—	1 000	240,000	—	14, Abchurch st.
Engall Rife. ....G	1/8 1/8	1/8 1/8	10/	—	1 000	125,000	—	15, Abchurch st.
Gresham Synd. ....G	1/8 1/8	1/8 1/8	1 0	1/- Jan. 16 '96	1 000	125,000	—	16, Abchurch st.
Hainault. ....G	1/8 1/8	1/8 1/8	1 0	-/4 Oct 30 '95	1 000	60,000	—	17, Abchurch st.
Hampton GoldFds. ....G	1/8 1/8	1/8 1/8	1 0	—				

The LIST of APPLICATIONS will OPEN this day SATURDAY, 25th January, and CLOSE for Town and Country on TUESDAY, 28th January, at 4 p.m.

THE LADY EMILY GOLD MINING COMPANY, LIMITED, COOLGARDIE.

Incorporated under the Companies Acts, 1862 to 1890.

CAPITAL £75,000.
In 75,000 Shares of £1 each. Working Capital, £25,000, of which £20,000 is secured by the present issue, the balance of 5,000 Shares being held in reserve for future issue, if and when required.

PRESENT ISSUE, 70,000 Shares, of which 25,000 Shares are to be issued as fully-paid to the Vendor in part consideration for the purchase, and the remaining 45,000 Shares are now offered for subscription at par. Payable—2s. 6d. on Application; 5s. on Allotment; 2s. 6d. one Month after Allotment; and the balance in calls not exceeding 5s. Share, at intervals of not less than one month.

DIRECTORS.

Graham King (Chairman, Lady Loch Gold Mining Company, Limited), Chairman.
T. Harrison Davis (Managing Director, West Australian Trust, Limited; Director, Lady Loch Gold Mining Company, Limited).
Roland G. Hill (Chairman, Taitapu Gold Estates, Limited; Director, Consolidated Black Reef Claims, Limited).
Benno Seimert (Director, White Feather Reward Claim, Limited).

BANKERS.

In London—Messrs. Glyn, Mills, Currie, and Co., 67, Lombard Street, E.C.

In Australia—The Bank of Australasia (Limited).

SOLICITORS—Ashurst, Morris, Crisp, and Co., 17, Throgmorton Avenue, E.C.

BROKERS—Walter Pankhurst and Co., 56, Old Broad Street, and Stock Exchange, E.C.

AUDITORS—Cooper Bros. and Co., 14, George Street, E.C.

SECRETARY—Charles Rawson.

OFFICES—9, Tokenhouse Yard, E.C.

PROSPECTUS.

The Company is formed to acquire, further develop, and work the Emily Mine, situated about two miles south-east of the township of Coolgardie.

AREA AND TITLE.

The property is held under Gold Mining Lease No. 532 of the Coolgardie Gold Field, and consists of 13 acres. The lease is granted direct from the Government of Western Australia, on the usual conditions.

SITUATION.

From the plan which accompanies the prospectus it will be seen that the property is situated in the heart of what has now been proved to be one of the richest gold bearing districts in Coolgardie, a number of rich reefs having already been opened up in this locality, the principal ones being the Lady Loch, the Forrest King, the Emily, the Regina, and the Surprise.

EMILY REEF.

On this Company's ground, near the centre of the property, a shaft has been sunk on the Emily Reef to a depth of 82 ft. upon a slight easterly dip. At the bottom of the shaft the reef has been driven on for about 30 ft., the reef varying from 2 ft. to 4 ft. in width.

The ore exposed in this working is estimated at a mill value of at least 30z. to the ton. In sinking the shaft a very rich shoot was passed through at a depth of 32 ft., and there is every indication, as proved by the sinking of shafts on this reef, on the Lady Loch, and on others in the immediate vicinity, that the reef will increase in size and in richness as greater depth is attained.

In the adjoining Regina Lease a shaft has been sunk near the southern boundary to a depth of 169 ft. In this shaft the reef is 5 ft. thick, with ore of the estimated milling value of 4 oz. to the ton. The course of this reef is towards this Company's ground, and on 15th December, 1895, the following cable was sent to Mr. Robert James, M.E.—"Does Regina Reef run into Emily Lease, and is it the same as reef Emily Shaft?"

Mr. JAMES replied by cable, dated Coolgardie, 2nd January, 1896, as follows—
"Emily the same in every respect Regina."

The Emily Reef alone would amply justify the expenditure of capital in developing the property, with the prospects of most satisfactory results, but in addition there is good reason for believing that the celebrated Lady Loch Reef will be found to run through the Lady Emily Company's ground.

LADY LOCH REEF.

The Lady Loch Gold Mine is situated in close proximity to the Company's property, to the south-east, and the workings have now opened up a reef of extraordinary richness, which continues to improve in value as it is developed. The shaft has now been sunk to a depth of 195 ft., exposing a strong, well-defined lode about 3 ft. 6 inches thick, a trial crushing from which yielded over 30z. to the ton.

The Lady Loch Reef traverses that Company's ground throughout its entire length, and continues its course into the adjoining properties on both sides. On the 1st October, 1895, a cable was received by the Lady Mauds Gold Mining Company from Messrs. James and Wright, Mining Engineers, as follows—
"Opair—The present depth of the shaft 80 ft. Stoping ore high grade, Lady Loch Lode."

This Company's ground is only separated from the Lady Loch by the Lady Mauds Gold Mining Company's property, and it is as there is every reason to believe will be the case, the Lady Loch Reef continues its present course it should traverse the property, in which case it is difficult to estimate the value of the mine.

WATER.

In some districts of Coolgardie want of water is a very serious obstacle to mining operations, but in the district in which this property is situated this difficulty fortunately does not appear to exist, experience having shown that sufficient water for milling purposes is met with in sinking in this particular locality at an average depth of 125 ft. Recent advices state that very heavy water has been struck in the Lady Loch.

CABLE REPORT.

A full report upon the property by the well-known mining expert, Mr. Robert James, M.E., accompanies the prospectus. This report having been made a year ago, and Mr. James having since himself become the owner of the property, the Directors thought it advisable to obtain confirmation of it. Accordingly, on the 6th December, 1895, a cable was sent instructing Mr. H. T. Howe, M.E., to report upon the property by cable, conjointly with Mr. James. The following is their cabled reply:

"Coolgardie, 14th December, 1895.

"Emily 13 acres. Reef proved to a depth of 82 ft. varying in width from 2 ft. to 6 ft. Reef give a mill result of 30z. gold to the ton. The ore as far as exposed is very free milling and the gold well distributed. 200 tons of ore are now on the dump. The property gives every promise of becoming one of the best mines in an already proved district."

FUTURE DEVELOPMENT.

It is intended to at once proceed with the sinking of the shaft and the systematic development of the mine.

The price to be paid by the Company for the property has been fixed by the Vendor, who is the promoter of the Company, at £50,000 payable as £1,000 in fully-paid Shares, and the rest to the balance in cash or fully-paid Shares at the option of the Directors. The Vendor pays all the expenses and charge attending the incorporation and establishment of the Company and the subscription of its capital, including the advertising and issue of its prospectus, brokerage, and commissions, and generally all preliminary expenses to allotment.

The following contracts have been entered into—(1) Dated the 22nd January, 1896, and made between Robert James of the one part, and Thomas Spencer Rees of the other part, and (2) dated the 21st January, 1896, and made between the said Thomas Spencer Rees of the one part, and the Company of the other part, for the sale of the property to the Company at a profit. Copies of the above contracts and of the Memorandum and Articles of Association of the Company, with the original reports, may be seen by intending applicants at the Offices of the Solicitors of the Company.

Agreements have also been entered into by the Vendor relating to the formation of the Company and the subscription of its capital, to none of which the Company is a party, and intending applicants for Shares shall be deemed to have had notice of the agreement, and to have waived the specification of the names of the parties to and the dates and other particulars of the said agreements, whether under the provisions of Section 35 of the Companies Act, 1862, or otherwise.

Applications for Shares should be made on the form accompanying the prospectus, and should be forwarded to either of the Company's Bankers with a remittance for the amount payable on application.

If less than the whole number of Shares applied for by any applicant be allotted, the surplus paid on application will be applied towards the sum due on allotment, and the balance (if any) returned. In case no allotment is made the deposit will be returned in full.

The prospectus and forms of application can be obtained at the Offices of the Company, or from the Company's Bankers, Brokers, or Solicitors, 8, London, 24th January, 1896.

PARIS LETTER.

(FROM OUR OWN CORRESPONDENT.)

French investments in the Transvaal.—The outlook for Rand mining scrip.—Gold mining enterprise abroad.—Phosphates in Tunis—Imports of English coal into France.

THE recent course of events in the Transvaal has not affected the Mining Market in Paris to anything like the extent that had been expected. From the first the French investor has had every confidence in the probability of matters satisfactorily righting themselves. It was fully believed that President Kruger would see the wisdom of conciliating the foreign population, and, by making the reasonable concessions demanded, convert his antagonists into really useful allies. But among certain groups of shareholders opinion is veering round in favour of the Uitlanders, who are said to have been driven to revolt by the Boers in order that these latter might secure profit therefrom. This view of the case is held to be justified by the present attitude of President Kruger in arresting all the leading members of the Rand industry, and placing their properties under sequestration, which is believed to be merely preliminary to a wholesale confiscation. Should such a thing take place it is certain that public opinion in France, which has so far been wholly on the side of President Kruger, will be entirely against him, for the vast body of shareholders will permit of nothing being done that may in any way affect their dividends. Another thing that has prevented any serious set-back is the conviction that France is destined to play a very important part in the development of the resources of the Transvaal. It is estimated that about one-third of the capital invested in the Rand mines is French, and shareholders are naturally not inclined to endanger their interests by giving way too readily to panic. On the contrary, they are seeking to secure a better standing in the Transvaal not only by obtaining more adequate representation in that country, but also by taking up good shares at the low rates now prevailing.

It is certain that the better tone of the Paris Bourse would be still further accentuated if it were not for the unfavourable reports coming from the London and Continental Exchanges. Investors are again purchasing gilt-edged scrip with more freedom, but certain stocks have naturally suffered heavily from the turn that events have taken in the Transvaal. Chartered, which fell to about 80 francs, are only slowly recovering, and at the moment are priced at no more than 84 francs 37. Upon the other hand, there is a steady improvement in Geldenhuys, Consolidated Gold Fields, Ferreiras, Langlaatz, and most of the other leading shares, and there is every prospect of this recovery being maintained. If the Stock Exchange would only show a little more steadiness, Paris would respond very readily, and the mining market would be in a much better position than it has been since the late "slump." No doubt this confidence is due in part to the moral support given to the market by the Banque Francaise de l'Afrique du Sud, which is now beginning to carry out its plan of operations. The syndicate has already secured the services of some of the best known men in the mining and financial world, including M. de Launay, a consulting engineer, who has just returned from a three months' visit to the Rand, where he has inspected all the mining properties. The Johannesburg branch of the syndicate established very shortly, and will be placed under the management of M. de Catelin, a mining engineer.

The anxiety of French capitalists to participate in gold mining is not restricted to the exploitation of properties in the Transvaal. There is scarcely a gold-producing country in the world in which French capital is not being placed, or is about to be invested.

A great deal of money has already been sunk in auriferous mining in Russia, which promises before long to contribute very largely to the world's output of the precious metal, and at the present moment French engineers are investigating properties in North America. The success of the De Lamar, and one or two other mines, has helped to rehabilitate the credit of mining enterprise on the American continent, which had been entirely destroyed by a long series of failures.

It is true that the ruin of so many promising concerns was due entirely to a want of proper management, and the employment of

of economical plant for the extraction of gold, but the vast

strikes that have been made in mining engineering during the

past few years will permit of success being attained under

conditions that were at one time deemed to be extremely

hazardous. The countries which, outside the Transvaal, are,

however, attracting most attention at the present moment are

Westralia and New Zealand. In the former colony a certain

amount of French capital has already been invested, and there

is every prospect of forthcoming issues being taken up pretty

freely. In New Zealand, also, the Haute Banque is interesting

itself very largely in gold mining, and one of the chief interests

in the New Zealand Exploration Company (Limited) is the

Compagnie Francaise des Mines d'Or et d'Exploration.

While the question of regulating the working of the phosphate

beds of Algeria continues to receive the consideration of

Government, some attention is being given to the existence of

mineral deposits in Tunis. It is somewhat surprising to learn

that Tunis possesses phosphates that are quite as rich as those

of the neighbouring colony. They are, indeed, a continuation of

the Algerian deposits, and were discovered during a geological

survey in 1885-7. They are situated at Gafsa, and are known to

have a length of at least 60 kilometres. At certain points they

have a depth of 25 metres. Two layers having a thickness

of 7 metres yield from 70 to 80 per cent. of pure phosphate.

These deposits were made over in June last to a

French company under certain conditions. It has to

lay down a line of railway from Sfax to Gafsa, without any

guarantee from the Government. The cost of this line is esti-

mated at 10,000,000 or 11,000,000 francs. The company has

also to pay to the Government a royalty of a franc upon every

ton of phosphate extracted, and if the selling price is more than

35 francs a ton the Government is to receive 25 per cent. of the

difference between this figure and the price at which the

phosphates are sold. These conditions are exceedingly favourable

to the Government of Tunis, which, by the way, have always

shown the greatest desire to turn the mineral resources of the

country to account, and they do not seem to differ very con-

siderably from the stipulations imposed by the Algerian autho-

rities upon the British companies, whose concessions have been

withdrawn by the French Government. The British firms are

contesting the legality of the Government's action before the

legal tribunals, and, in the meantime, the department of Con-

stantine and the Port of Bône are heavy losers by the extraordi-

nary policy of the Government in suppressing British enterprise

in Algeria.

The imports of English coal into France in 1894, for which

statistics are now available, amounted to only 1,161,530 tons, as

against 2,977,430 tons in the previous year. It is not easy to

give an explanation of this remarkable contraction unless it be

upon the hypothesis that the labour troubles of 1894 may have

restricted the exports of fuel to this country. It is certain that the contraction has not been brought about by the successful competition of the French coal owners, who are only now beginning to find themselves in a position to do business on equal terms with the English companies. The reduction of tariffs upon the transport of coal from the north of France to the consuming districts hitherto supplied almost exclusively with English fuel will, no doubt, do much to assist the French industry, but the English coal owner will always be able to keep the bulk of the trade in his hands when it comes to cutting prices and supplying fuel of a superior quality. It will be interesting to see if the facilities afforded to the owners in the Pas de Calais during the past year for competing with the imported fuel will have had the result of still further restricting the sale of English coal in France.

CORRESPONDENCE.

We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.

THE ORIGIN OF GOLD.

TO THE EDITOR OF "THE MINING JOURNAL."

DEAR SIR,—There has been much theorising about the origin of gold. Professor Draper says it is the ultimatum of metallic ores that they reach their goal in turning into gold. Sanstadt and Lobley incline to the idea that it is formed from an aqueous medium, and so did my good friend, J. C. Newbery, of Melbourne (deceased). Tifféreau thinks it is the only one radical metallic force, which, by the application of what he calls a catalytic force, is gold.

Lobley's idea seems very feasible, and I see there is a company in America for extraction of gold from the ocean. I think that gold must exist primarily in an invisible atomic state, whether in an aqueous or other medium matters not, and that an electric or magnetic agency has brought the atoms together, both as alluvial nuggets or as pieces in other rock.

A drop of auric chloride on a glass slip under a microscope, and connected with a galvanic battery arrangement, forms almost instantly arborescent or tree-like gold. Sulphate of copper in solution, with a piece of zinc introduced, develops the native metal—copper. Alluvial nuggets, however formed, can be carried by underground streams of water to some distance; but how about the immense nuggets, or rather blocks, of Victoria, from 50 to 200 lbs. weight, which, there is no reason to believe, were originally formed in a quartz or iron reef? The great "Welcome Stranger" block, 21

of the cement and clay you will find the gold, but none, perhaps, upwards to grass. Besides, this continent is rising or the water leaving it, at about two or three inches a year, so the gravel gets dry, and a slight shock or two of earthquake would help the subsidence of the gold. Although the presence of the metamorphic rocks seem a strong point with gold, it may be, from their presumed connection with heat, that they act as a sort of "fixer," and so enclose the gold.

I may as well add that I am not interested commercially in mining, having never had a mine share, and never will, mineralogy being a sort of hobby to me, but I am almost certain that the gold reefs of South Australia are as rich as those of Victoria, and as good as any of Western Australia, but there is too much juggling on the share markets, and a pretty fair lot of roguery. "We cannot want the metal; only an excitement about the place, and get the shares off at a premium," is a remark often made here. And to think that all the mines in West Australia will pay working expenses, is all nonsense, but people will speculate at a distance, when they have as good resources close to their own doors. Less than $\frac{1}{2}$ ounce gold per ton will pay more handsomely at our mines than 5 ounces at West Australia.

There are many contingencies in mining which sanguine adventurers never think of. The fires at Broken Hill were caused by the generation of heat chemically from the nature of the ores, and they will never be safe from this risk. At the Comstock the water below is so hot that it precludes working. Silver mines are generally rich at surface, but at depth decrease, though there may be abundance of ores, which may, in part, compensate for the surface richness.—Yours truly,

Adelaide, December, 1895.

GOLD MINER.

THE BRITISH BROKEN HILL PROPRIETARY COMPANY, LIMITED.

TO THE EDITOR OF "THE MINING JOURNAL."

DEAR SIR,—The further letter signed by "Pro Bono Publico" in your columns of last week struck me with astonishment, for I was surprised at the deplorable ignorance displayed therein as to the affairs of this company.

The expenditure of £10,000 on plant to treat sulphides is, he says, the crux of the whole situation. Has your correspondent any knowledge of the good results obtained by other adjoining mines using the same system of machinery as this company is now adopting? He cannot know, for if he did he could not be guilty of such apparent ignorance. Let me tell him that there are several mines in the same district, and having the same class of ores as this company, which have been rescued and brought to a prosperous state, simply by using this same method of successful treatment. Let me also tell him that Mr. Greenway, the manager of one of these mines, who has himself successfully operated this process, has reported on it to this company, and strongly recommends its use. What better economic grounds can any reasonable being want? This is neither experimental nor problematical; it is matter-of-fact experience, such as the public like.

Your correspondent takes rather a long time to "hatch." This company has been in existence for some six years or so. About two years ago the management came into the present hands, since when the prospects of this concern have very materially improved, as is evidenced by the increased market value of the shares. What has caused this? He does not venture to explain this.

He hints at secrecy, but to me there is nothing secret in the whole affair. The directors are well known; the system of process (Hancock jigs) is well known; and the success accruing from the adoption of such machinery is well known; so where does the secrecy come in? And most people are glad when they have more than sufficient means (like this company) to institute such profitable "experiments."

He calls his remarks "argument"—a graceful term forsooth! —and practically asks me to "disprove criticism," but is it possible to "disprove criticism"? I simply have stated facts which speak convincingly to the unbiased public, whom I now finally ask to draw their own reasonable conclusions as to the highly favourable prospects of this company.—Yours faithfully,

JANUARY 23.
BONA FIDE SHAREHOLDER.

PLEIADES.

TO THE EDITOR OF "THE MINING JOURNAL."

DEAR SIR,—Now that Mr. Barnato has thought proper to give an account to those interested in Barnato Consols, Barnato Bank, &c., will it be too exacting on the part of less important shareholders to ask for information in respect of Pleiades? Yours—

ONE OF THE CONSTELLATION.

MINING IN CORNWALL AND DEVON:

NOTES ON MINING IN THE WEST.

FROM OUR SPECIAL CORRESPONDENT.)

We have heard enough and to spare during the last three weeks of the crisis in the Transvaal; since last Thursday the crisis in Cornwall has taken its place as the topic which is everywhere canvassed. The announcement that Mr. Michael Henry Williams would at once relinquish the shares in Cornish mines held by him, with the single exception of Dolcoath, caused the utmost consternation last week, and opinion was divided as to who should be regarded as most blameworthy—Mr. Bassett and Mr. Goddard—for their determination to exact the uttermost farthing at a time when the mining industry is sick unto death, or Mr. Williams, for his precipitate retreat. For a few days nothing was talked of but the imminent closing down of all the mines belonging to what may be called the inter-dependent group—i.e., those which will all be more or less seriously affected if one of their number is stopped. During the earlier days of this week, however, there has been a decided rally, and people no longer talk as if a single individual could shut up half the mines in the county by merely writing out a few relinquishments. Several factors have been at work in contributing to the establishment of an easier and more healthy feeling. In the first place, Mr. Strauss, M.P., is understood to have offered to take up the major portion, if not all, of the shares relinquished by Mr. Williams, and this action on his part is taken as indicative of his confidence in the future of the tin market, no less than of the genuineness of his desire to serve his constituents. In the second place, Mr. Goddard has explained the Tehidy attitude at great length to the representative of a daily newspaper, and it cannot be said that he has completely justified the action taken, he has at least removed some misapprehensions and disposed of some wildly absurd rumours which were causing great alarm to timid people.

MR. GODDARD states that when the draft lease was handed to Mr. C. V. Thomas on June 15 of last year, it was accompanied by a letter, in which it was stated that the new lease followed on the lines of the old one, but had been shortened and simplified in form, and contained a grant in terms of the land already taken by the company, and to be paid for before the granting of the lease. The matter was, according to Mr. Goddard, repeatedly talked over between himself, Captain Josiah Thomas, and Captain Arthur Thomas, and it was a great surprise to him when he saw Mr. C. V. Thomas in the middle of December, to be told by him that he did not understand this commutation of damage rent was to be a condition precedent to the granting of a new lease. "It has been implied," says Mr. Goddard, "that in this matter I have been acting on my own responsibility, and that Mr. Bassett has not been consulted in the matter. So far from this being the case, Mr. Bassett, his solicitors, and Mr. Foster Brown have been consulted from the first, and are as one with me in all that I have done." It is understood that Mr. C. V. Thomas does not accept Mr. Goddard's version of the negotiations between them as being absolutely correct, and further developments are awaited with considerable interest. In the meantime it is generally felt that the action of the Tehidy estate, even if strictly within the legal rights of landlord, is decidedly harsh and ill-advised.

It is generally felt that the future of Carn Brea Mine depends to a large extent on the future of the district of which it is the centre. If this big sett should be thrown idle, the neighbouring mines would be flooded, and most of them would, under present circumstances, be compelled to close down. It is, therefore, believed that, in spite of the present heavy losses and comparative poverty of the mine, a strenuous effort will be made to avert a calamity which would have such disastrous and far-reaching results. An amalgamation on a bigger scale than anything yet attempted is confidently talked of, which would take in Carn Brea, Tincroft, and Cook's Kitchen, if not some other mines. The speculation would be a fair one, even with tin at its present price, and, in the interests of the county, it is to be hoped that it may be carried to a successful conclusion.

In spite of the annoying dispute with Tehidy, the prospects of Wheal Bassett and South Frances, now that the amalgamation has been practically completed, are decidedly good. At Wheal Bassett meeting, on Monday, a profit of £3700 was shown. The mine is looking exceedingly well in the bottom, and there is not the least doubt that it can be worked at a handsome profit even under present conditions. At the subsequent meeting of South Frances' adventurers it transpired that the claim from Tehidy for land damage has not yet been settled. An interview has taken place between Messrs. Daubuz and Lanyon, representing the mine, and Mr. Goddard, which, it is to be feared, has not brought an amicable settlement nearer. Mr. Lanyon expressed his willingness to do his best to induce the adventurers to pay £500, but Mr. Goddard absolutely refused to entertain the offer, and so the deadlock continues.

THE UITLANDERS' LETTER TO DR. JAMESON.

The full text of the letter addressed to Dr. Jameson, which was found on the battle field at Krugersdorp, has been sent over by Reuter. It is as follows:—

JOHANNESBURG, December 20.

DR. JAMESON.

DEAR SIR,—The position of matters in this State has become so critical that at no distant period there will be a conflict between the Government and the Uitlander population. It is scarcely necessary for us to recapitulate what is now a matter of history. Suffice it that the position of thousands of Englishmen and others is rapidly becoming intolerable. Not satisfied with making the Uitlanders pay virtually the whole of the revenue of the country, while denying them representation, the policy has been steadily to encroach upon the liberty of the subject, and to undermine the security of property to such an extent as to leave a very deep-seated cause of discontent and danger. A foreign corporation of Hollanders is, to a considerable extent, controlling our destinies, and, in conjunction with the Boer leaders, is endeavouring to cast them in a mould which is wholly foreign to the genius of the people. Every public act betrays the most positive hostility not only to everything English, but to the neighbouring States as well. In short, the internal policy of the Government is such as to have roused into antagonism not only practically the whole body of Uitlanders, but a large number of the Boers, while its external policy has exasperated the neighbouring States, causing the

Possibility of Great Danger to the Peace

and independence of the Republic. Public feeling is in a condition of smouldering discontent. All the petitions of the people have been refused with a greater or less degree of contempt, and in the debate on the franchise petition, signed by nearly 40,000 people, one member challenged the Uitlanders to fight for the right they asked for, and not a single member spoke against him. Not to go into details we may say that the Government called into existence all the elements necessary for armed conflict. The one desire of the people here is for fair play and the maintenance of the independence and the preservation of their public liberties, without which life is not worth having. The Government denies these things, and violates the national sense of Englishmen at every turn. What we have to consider is what will be the condition of things here, in the event of conflict, with thousands of unarmed men, women, and children of our race. They will be at the mercy of well-armed Boers, while property of enormous value would be in the greatest peril. We cannot contemplate the future without the gravest apprehension, and feel that we are justified in taking steps to prevent the shedding of blood to ensure the protection of our rights. It is under these circumstances that we feel constrained to call upon you to come to our aid should a disturbance arise here. The circumstances are so extreme that we cannot avoid this step, and we cannot but believe that you and the men under you will not fail to come to the rescue of the people who would be so situated. We guarantee any expense that may be incurred by you in helping us, and ask you to believe that nothing but the sternest necessity has prompted this appeal.—We are, yours faithfully,

(Signed) CHAS. LEONARD.
FRANCIS RHODES.
LIONEL PHILLIPS.
JOHN HAYES HAMMOND.
GEORGE FARRELL.

MR. F. BOWES-SMITH, of Bowes-Smith, and Co., Mining Engineers, of London and Coolgardie, is returning to Coolgardie by s.s. *Rome*, which left London on 17th inst.

MR. PERCIVAL FOWLER, M.Inst.M.M., M.I.C.E., F.G.S., leaves by the s.s. *Valetta* on the 30th inst., for an extended professional tour in West Australia. We wish him *bon voyage*.

SOUTH AFRICAN MINES' OUTPUT FOR DECEMBER.

	GOLD					
	Ozs.	Ozs.	Ozs.	Ozs.	Ozs.	Ozs.
Barrett	425	283	274	815	805	546
Block B	3,240	3,581	3,594	3,606	3,418	3,690
Buffelsdoorn	4,660	3,361	—	2,049	2,716	4,011
Champ D'Or	8,920	4,516	3,776	4,005	3,523	—
City and Suburban	10,096	10,216	8,381	8,597	8,225	8,036
Crown Reef	11,849	11,531	11,385	11,100	11,448	10,729
Durbas-Rodepoort	5,899	6,006	6,089	6,318	5,222	4,710
Eastleigh	1,912	2,166	1,994	2,042	2,150	—
Forreira	7,081	7,011	7,439	7,740	8,116	11,050
Forbes Reef	141	99	75	7,468	68	109
Geldenhuys Deep	—	—	—	—	3,698	—
Geldenhuys Estate	7,778	7,788	7,236	6,893	6,532	5,099
Geldenhuys Main Reef	3,375	2,163	2,988	1,835	19	2,052
George and May	770	173	—	—	—	—
George Goch	3,052	3,099	3,361	3,244	3,190	3,355
Ginsberg	930	813	851	857	768	679
Glencairn Main Reef	4,918	5,209	4,096	1,955	6,155	5,304
G. F. of Mashona and	348	—	—	—	—	—
Henry Nourse	4,561	4,210	4,562	4,724	4,847	5,021
Joe's Reefs	327	331	150	230	258	205
Johannesburg Pioneer	1,310	2,692	2,507	—	—	—
Jubilee	2,613	2,707	2,727	2,176	2,334	2,689
Jumpers	6,108	7,079	6,497	6,355	5,957	4,960
Langlaagte Estate	12,021	11,472	11,081	11,055	10,740	9,679
Langlaagte Royal	3,401	329	—	—	—	—
Lancaster	—	—	—	—	314	234
Lisbon-Berlyn	590	522	640	644	692	653
May Consolidated	6,025	6,030	6,032	5,604	5,738	5,299
Metropolitan	2,411	2,173	1,981	1,916	1,621	—
Meyer and Charlton	3,296	3,745	3,642	3,358	2,885	3,264
Minerva	—	—	—	—	1,695	1,139
Moodies	—	—	515	—	—	809
New Chimes	2,419	2,459	2,431	2,370	2,363	—
New Clewer Estate	1,389	1,479	—	1,473	2,223	1,381
New Comet	—	—	—	—	2,327	2,430
New Crosses	2,932	3,084	2,851	2,765	2,734	2,175
New Heriot	5,368	5,738	5,998	5,803	5,735	5,326
New Kleinfontein	2,826	2,829	2,631	2,608	2,519	2,552
New Midas	645	499	—	—	—	—
New Primrose	12,150	12,026	11,418	11,584	12,023	9,553
New Rietfontein	2,235	2,328	2,448	2,162	2,289	1,901
Nigel	3,633	3,724	2,658	2,550	2,613	2,844
Orion	3,730	3,700	3,711	3,850	2,500	2,900
Paarl Central	3,127	3,138	3,083	2,330	1,932	—
Porges-Randfontein	3,918	4,114	3,921	3,821	2,515	—
Princess Estate	2,105	2,150	2,000	2,100	2,024	1,334
Robinson	14,824	15,935	17,294	17,371	16,367	16,024
Roodepoort United M.R.	4,767	2,450a	4,691	4,823	4,719	3,625
Salisbury	2,278	2,450	3,043	3,000	2,550	2,450
Sheba	2,618	4,807	5,843	6,980	6,563	

SOME WESTRALIAN CRUSHINGS.

Mr. John S. Read, of the Perth (W.A.) Stock Exchange, in his monthly report dated December 14, refers to the satisfactory development of reefs at depths of 200 feet to 300 feet. Mr. Read records the following crushings of local companies:

	Tons.	Ounces.
Bayley's No. 1 South ..	113	186
" cleaned plates ..	—	382
Belgrave (Cue) ..	45	46
Caledonian Extended (Nannine) ..	26	427
Cook's Hill (Nullagine) ..	9	164
Cue 1 Proprietary ..	200	300
Central (Southern Cross) ..	804	431
Central No. 1 Extended ..	172	98
Doherty and Co. (Nullagine) ..	15	49
Fortune of War ..	240	173
Fleur de Maie ..	25	27
Fraser's South ..	838	316
Hill End (Broad Arrow) ..	45	741
Ivanhoe (Hannan's) ..	147	293
Ironclad (Pilbara) ..	64	27
Lake View ..	300	878
Lyons and Chearnley (Nullagine) ..	3½	25
Lady Mary South (Murchison) ..	50	90
Mount Corlie (Broad Arrow) ..	4½	26
Morning Star (Mount Magnet) ..	—	577
Princess Ada (Cue) ..	—	58
Proprietary (Bamboo Creek) ..	150	347
Nannine ..	76	31
Trenton ..	415	421
Tindal's (Coolgardie) ..	30	164
Treasure Trove Extended ..	100	225
Queen of the Lake ..	42	22

REPORTS FROM THE MINES.

BRITISH MINES.

DEVON GREAT CONSOLS.—W. Cleme, January 23: Monthly report: Wheal Anna Maria engine shaft. The stope in the bottom of the 124 fathom level east is yielding 8 tons of mudi and 3 tons of copper ore per fathom. The stope in the back of the 110 fathom level east is yielding 4 tons of mudi and 5 tons of copper ore per fathom.—Field shaft south lode. In the stope in the bottom of the 130 fathom level west there is a good lode, yielding 9 tons of mudi and 6 tons of copper ore per fathom.—Wheal Josiah Field shaft south lode. In the stope in back of the 130 fathom level east the lode will produce 7 tons of mudi and 4 tons of copper ore per fathom.—Richard's shaft. In the stope in the bottom of the 115 fathom level east the lode is worth 6 tons of mudi and 6 tons of copper ore per fathom.—Wheal Emma Field shaft south lode. In the stope in back of the 130 fathom level east the lode will produce 4 tons of copper and mudi ore per fathom.—Wheal Emma. Thomas's shaft. The stope in the back of the 130 fathom level east will yield 6 tons of mudi and 3 tons of copper ore per fathom. In the stope in the back of the 100 fathom level east the lode is yielding 9 tons of mudi and 2 tons of copper ore per fathom. In No. 2 stope in the bottom of the 100 fathom level east there is a large lode yielding 10 tons of mudi and 2 tons of copper ore per fathom. The stope in the back of the 100 fathom level west the lode will produce 8 tons of mudi and 3 tons of copper ore per fathom.—Inclined shaft. The stope in the back of the 162 fathom level east will yield 4 tons of mudi and 3 tons of copper ore per fathom. In the stope in the back of the 162 fathom level east No. 2 the lode is worth 6 tons of mudi and 2 tons of copper ore per fathom. In the stope in the back of the 100 fathom level west the lode will produce 5 tons of mudi and 2 tons of copper ore per fathom. In No. 2 stope in the back of the 172 fathom level east will yield 5 tons of copper and mudi ore per fathom. The stope in the back of the 172 fathom level east the lode will provide 5 tons of copper and mudi ore per fathom. The stope in the back of the 160 fathom level is yielding 7 tons of copper and mudi ore per fathom. In No. 2 stope in the back of the 160 fathom east the lode is turning out 6 tons of copper and mudi ore per fathom. The stope in the back of the 148 fathom level east is also turning out 6 tons of copper and mudi ore per fathom. The stope in the bottom of the 136 fathom level west is worth 4 tons of copper and mudi ore per fathom. The weather during the past month has been remarkably favourable for the season of the year, and all our workings have continued in full operation.

LEADHILLS.—W. H. Paull, January 20; Brown's vein. In the 160 fathom level driving north of Jeffrey's shaft the vein is 4 feet wide, showing more spar, containing small stones of lead ore, and of a more promising character than of late. The vein in same level south of Wilson's shaft is over 4 feet wide, containing a strong mixture of spar, but still unproductive for ore. In stope above over same level (160) south of Wilson's shaft is worth 90 cwt. of ore per fathom. A new stope has been started over this level north of Jeffrey's shaft where the vein is now producing 50 cwt. of ore per fathom. In stope above drift over the 160 fathom level north of Wilson's shaft the vein will produce 35 cwt. of ore per fathom. The stope above drift over same level (160) south of Wilson's shaft is worth 90 cwt. of ore per fathom. No. 4 stope above the 145 fathom level north of Jeffrey's shaft has been worked out. Nos. 1 and 2 stopes over the 115 fathom level north of Jeffrey's shaft are worth respectively 20 cwt. and 30 cwt. of ore per fathom. The 100 fathom level west of Brown's vein is being pushed forward on a vein 4 feet wide, which contains a little spar, but stone rather dark and soft for bearing ore. The vein in the 85 fathom level driving south of Wilson's shaft is 4 feet wide, well mixed with spar, but poor. The stope over this and the upper levels are producing about their usual quantities of ore.—Raik and Highwork veins. The ground in crosscut driving eastwards at the 100 fathom level is a little easier for exploring and end damp; no other change there. At the 100 driving south of crosscut Raik vein continues soft and unproductive. In same level driving north of crosscut said vein is of a promising character, and worth at present 30 cwt. of lead ore per fathom. In driving Gripp's adit level northwards, George's Rout vein contains strong spar spotted with lead ore, but not enough to value. Surface works are being pushed forward regularly, and weather now favourable for the season.

POLBERRO.—January 17: We still continue to make good speed in driving the 50 end north by the rock drill, having driven 10 fathoms in the last four weeks, the samples from this end yielding about 14 lbs. of tin to the ton. We have arranged to take the rock drill from the north end, and fix it in the 50 end south in order that we may cut the Pink lode as quickly as possible. We are taking down ground to prepare for sinking winze at the 26 fathom level on Pink lode. The lode in the 26 end, east is improved and yields rich stones of copper and tin.—(Signed) Charles Thomas, John Harper.

WEST KITTY (St. Agnes, Scorrier, Cornwall).—January 23: The rise in the back of the 94 fathom level is worth £8 per fathom. The 84 end west is yielding a little tin, but not to value. The rise in back of the 84 is worth £9 per fathom. The 72 end west is worth £7 per fathom. The 60 end west, north of slide, is worth £9 per fathom. The rise in back of this level is worth £13 per fathom.—South of slide. The No. 2

rise in back of the 60 fathom level east of crosscut is worth £7 per fathom. The 50 end east of No. 1 rise is worth £7 per fathom. The 60 end west is holed to Thomas's shaft; this has given good ventilation to the south part of the mine. The shaft men are now engaged in making the necessary preparations for sinking the shaft. The stopes and tribute pitches continue to yield the usual quantity of tin. The mine throughout is looking well. We had a breakage to the winding-engine of Reynolds's shaft, which hindered the drawing for three days. Everything is working all right again.—(Signed) Joel Hooper, John Williams.

SOUTH CONDURROW.—January 22: The lode in the 40 end east is divided by a patch of granite, and is now without tin to value. We are driving on the north part, and hope it will shortly improve. The stope behind the end is not so good as it has been. The other stopes in the back of this level are worth £9 per fathom each. Three stopes in the back of the 60 east is worth £10 per fathom.—(Signed) Wm. Rich.

WEARDALE LEAD.—Report for week ending January 18: Groverake. Crosscutting to Greenleugh vein north from Adamson's drift, vein not yet cut. 50 fathom level west in south part of vein, vein 3 feet wide of spar, hard, and slow to drive, worth 8 cwt. per fathom. 60 fathoms level east, vein sparry, but rather poorer in ore, worth 6 cwt. per fathom. Tribes ore for the week returned at 14-2-8 bings.—Boltsburn. Stopes in north flat from Watts level worth 40, 30, 20, 10, 8 cwt. per fathom. Stopes in south flat worth 45, 16, 12, and 16 cwt. per fathom. Stopes in vein worth 26 cwt. per fathom.—Greenlawns. Nattrass gill drift in the crosscut under Quarry Hazel out of Moses' Rise we have cut some douk and spar strings; the men are now driving in the vein—stopes worth 10 cwt. per fathom. Watson's drift, no change. Races drift, strong sparry vein, worth 12 cwt. per fathom. Stopes worth 10 and 12 cwt. per fathom. Stoney Hazel drift, a strong vein, worth 16 cwt. per fathom. Lowe's drift, vein 4 feet wide, composed of spar ride and a little ore, worth 8 cwt. per fathom. In the crosscut in scar limestone to north, we have cut part of vein about 2 feet wide of spar, but with no ore in it to value. In quarry level the stope is worth 8 cwt. per fathom.—Sedling. Driving 64 level east. The vein has improved, worth 12 cwt. per fathom. Stopes above 64 level east worth 16, 14, 8 and 8 cwt. per fathom. Stopes above 56 level worth 16 and 14 cwt. per fathom. Stopes above 64 level west worth 14 cwt. per fathom. In driving the 74 level east a strong vein has come in from the south composed of quartz, fluor, and sider, with traces of ore. Firm ground. Ore raised for the week, 49 tons; ore dressed for the week, 61 tons; ore slag and flue smelted for the week, 96 tons, producing 47 tons of pig lead.

COLONIAL, INDIAN, AND FOREIGN MINES.

COLON GOLD MINES.—The mine superintendent, Mr. Arthur J. Russell, writes under date December 18, as follows: In the last letter received from our Bogota agent he quite despaired of getting any attention to his constant petitions to the Minister. He says that although he knows the papers are in the Ministry, and the resolution is draft, from simple neglect on the part of the Minister, he cannot get the papers dispatched. He now begs me, as the only course, to request the intervention of the British Minister. I have decided, however, to leave this on the 26th instant for Bogota. Upon arrival there I shall present a petition to the President and, if I can get an interview, I will explain to him the situation. If, then, I cannot get any attention, there is no other course open but to seek protection from the British Minister against what is a scandalous injustice.

GRAVEL.—W. St. D. Griffith, December 21: Run No. 13, Washing was continued on the Chasco bank until November 28, when we commenced cleaning down, and on the 30th the district was visited by a very severe thunderstorm, which did a great deal of damage in the lower parts of the ditch. Owing to this we were unable to clean up the cuts of the Chasco Mine and the whole of the Menteria Mine. The result of the clean up was \$275-\$300 gold after 1229 hours' run, the profit being \$750 gold. But this must not be taken as the whole amount of gold extracted during the run, as a considerable quantity remained in the cuts and soft bedrock of the mines. Taking into consideration the severity of the above-mentioned storm, I was surprised that we did not suffer more damage on our ditch. This is the first accident of any importance since last April. We hope to have the water on to-day, when we shall commence Run No. 14 on the Rica bank.

LOMA.—The mine superintendent reports under date December 12 as follows:—We continued washing in the Soto Mine up to November 16, on which day we started cleaning down after a run of only 335 hours on gravel, owing to the scarcity of water; on November 22 we cleaned up \$1,285,380 gold dollars, and have paid expenses. When we left on washing, the face of the mine looked very well, and I am quite certain that the mine will give good returns. Run No. 11 was commenced on November 24 in the Soto Mine. The water supply has now increased, and the ditches, siphons, and reservoir are all in good order.—(Signed) Wm. St. David Griffith.

MOUNT ZEEHAN (Tasmania).—Manager reports for week ended December 10: Silver Queen section. No. 8 lode main shaft, No. 2 level, No. 1 rise has been put up 7 feet, total 46 feet, and have started to crosscut lode from top of rise and driven 9 feet west. Ground being favourable for progress, expect to cut shoot of ore and reach footwall in about a week.—Concentrator has been running on small parcels of second-class ore from tributaries. Tributaries are preparing for a small plant to pump and wind.

NAMAQUA COPPER.—Abstract of superintendent's report for November: Tweefontein Mine. 125 fathom level east. The lode maintains its value and has a promising appearance. Worth 7 tons of ore per fathom.—106 fathom level west. There is no change at this point. Worth 2 tons of ore per fathom.—Stopes: No. 1 back of 115 fathom level west. The ore is of high percentage. Worth 6 tons of ore per fathom.—No. 2 back of 105 fathom level west. The lode has been very broad, but there are indications of it becoming narrower. Worth 7 tons of ore per fathom.—No. 3 at the 105 fathom level east. The productive ground on the north side is extending very satisfactorily. Worth 8 tons of ore per fathom.—No. 4 bottom of 95 fathom level east. Here the lode maintains about its usual value, and is worth 8 tons of ore per fathom.—No. 2 shaft: Stopes No. 1 and No. 2. The stopes continue to yield satisfactorily, and are each worth 9 tons of ore per fathom.—No. 4 shaft intermediate level east. The driving of this level will shortly be resumed. It will be started in a large and productive lode.—Intermediate level west. In the forebreast a piece of unproductive ground has been met with, but probably this will die out, as ore is found on both sides of it; worth 10 tons of ore per fathom.—12 fathom level. This level has been started in a lode about 3 feet wide, and it contains good stones of ore.—No. 5 shaft. When the required depth has been sunk to meet the intermediate level, a driving will be started towards that point.—Wheal Julia, central shaft. Working suspended since November, 1891, has been resumed. This shaft has been cleared out and deepened to about 45 feet. In the bottom there is a promising lode the whole breadth of the shaft, composed of quartz and mica spotted with copper ore.—Shipping. The Hindoo arrived at Port Nolloth to load on December 22. The Swansea Castle arrived at Swansea on December 30, with about 850 tons of ore. The Andaman and Glanrafon left Port Nolloth for Swansea, with about 1350 and 650 tons of ore, on January 11 and 12 respectively.—Output for December, 750 tons of ore of 27 per cent.

SELL'S REGISTERED TELEGRAPHIC ADDRESSES, 1896.—We have received a copy of this well-known and extremely valuable work. The present volume contains a very large number of alterations which have been effected since the last annual issue was printed. Upwards of 12,000 new registrations, cancellations, and other alterations have been received from the Post Office, in addition to the enormous number of trades, professions, and telephone numbers included in the alphabetical lists, making together upwards of 30,000 individual alterations.

has been obtained from this level during the fortnight. Occasional bunches of stone make on the hanging wall, but so far there is no defined reef. I think as this level is advanced the prospects should improve. Stoping has been carried on both sides of the winze, the reef being irregular from a leader to 4 inches. The track road has been formed for a distance of 40 feet from the level.—No. 4 formation, No. 3 north level. Stoping has been carried on over this level, the formation varying from 3 to 8 feet, and carrying a reef from 6 to 10 inches.—Straight shaft. The straight shaft has been sunk a further depth of 21 feet, making it 311 feet from 4 plat and 1313 feet from the surface. The sinking during the fortnight has been very tedious owing to the ground being very heady and hard and bad for shooting. The water is about the same. I would recommend sinking about 10 feet more before commencing to timber, which will give us about 50 feet for a well-hole. I am inclined to think that we are not in a main footwall. To-day a floor came in carrying a little formation with a thin vein of quartz.—Quantity of stuff raised during fortnight: No. 2 formation 44 trucks; No. 2 south level (footwall) 180 truck; No. 4 formation 89 trucks; total, 313 trucks.

BROKEN HILL PROPRIETARY.—Report for the week ending January 23:—6192 tons of ore treated yielded 481 tons of lead, containing 140,468 ounces silver, also 910 tons treated by amalgamating and leaching plants produced 9519 ounces silver. The price of the shares in Melbourne is £3 1s.

TOLIMA.—The following is an abstract of advices received by the mill of January 22, from the mines: Frias estimated November returns, 110 tms fine silver valued at £2, 9d. per ounce, £215 12s. 7d.; cost, £2733 1s. 7d.; profit, £933 9s. The underground agent reports 116 fathoms 5 feet 6 inches of ground expended of which 86 fathoms 2 feet 4 inches were productive, leaving 30 fathoms 3 feet 2 inches of unproductive ground. The superintendant, writing under date of December 19, announces a marked improvement in the 150 fathom west end footwall branch main lode, and that the hanging wall branch of the same is also giving here and there spots of mineral. He adds that he expects that the two branches will join up further to the west, when good miners may be anticipated at the juncture. He further reports that the 150 fathoms prospecting winze yielded 1 ton per fathom of very high class mineral during the month, a sample from which assayed over 800 ounces per ton. During the first week in December there was a decline in the yield, but at date of writing a tendency to improve again was discernible. The superintendent reports that the 92 and 110 fathom east levels main lodes are being driven on a well-defined and very promising lode. He also reports encouraging appearances in the 100 fathom west end main lode, where spots of mineral are showing up on the hanging wall, whilst the workings at the 110 and 120 fathom north branch were productive during November, though the last assays made show the average grade of mineral to be lower. The shallow adit is being driven towards the Real de Frias through very tight and poor ground, which the superintendent remarks is against speed, whilst he states that there is little change to report respecting the aspect of the underground workings at the latter mine.—Underground department. Engine shaft was sunk 15 feet by 10 men at \$200 per fathom, thus being about 15 feet as total depth below the sole of the 150 fathom level. The footwall part of the lode is lost, and the winze being only sunk upon the hanging part of the lode and adams are yielding 1 ton per fathom of very high class mineral during the month, a sample from which assayed over 800 ounces per ton. During the first week in December there was a decline in the yield, but at date of writing a tendency to improve again was discernible. The superintendent reports that the 92 and 110 fathom east levels main lodes are being driven on a well-defined and very promising lode. He also reports encouraging appearances in the 100 fathom west end main lode, where spots of mineral are showing up on the hanging wall, whilst the workings at the 110 and 120 fathom north branch were productive during November, though the last assays made show the average grade of mineral to be lower. The shallow adit is being driven towards the Real de Frias through very tight and poor ground, which the superintendent remarks is against speed, whilst he states that there is little change to report respecting the aspect of the underground workings at the latter mine.

GEORGE GOCH AMALGAMATED (No. 1 Section).—Abbreviated report for the month of November:—Mine. Number of feet driven, sink, and rise 745 feet 6 inches, quartz mined 9718 tons, less waste rock discarded 2733 tons, quartz mined and milled 6980 tons, quartz developed in excess of that mined 10,428 tons.—Mill. Number of days working 81 stamps 2614 days, number of tons crushed 6980 tons, yield in smelting gold 1255 ounces 12 dwts., yield per ton 528 dwts.—Cyanide works. Number of tons of tailings treated 415 tons, yield in smelting gold 1255 ounces 12 dwts., yield per ton 528 dwts.—Working cost. Mining (including maintenance) 1s. 2½d. per ton, milling (including maintenance) 3s. 0 68d. per ton, general charges in 0 3d. per ton, mine development redemption 1s. 2d. per ton, cyanide working (including maintenance) 4s. 52d. per ton, value of yield 1s. 10 28d. per ton, balance, 1s. 5 74d. No. 2 section Metropolitan Company's works. Abbreviated report for the month of November: Mine. Number of feet driven, sink, and rise 382 feet 2 inches. Quartz mined 50 7 tons. L. & W. a waste rock discarded 1559 tons. Quartz mined and milled 3508 tons. Quartz developed in excess of that mined 411 tons.—Mill. Number of days working (40 stamps) 20. Number of tons crushed 3508 tons. Yield in smelting gold 877 ounces 5 dwts. Yield per ton 5 dwts.—Cyanide works. Number of tons of tailings treated 4785. Yield in smelting gold 744 dwts. Yield per ton 2 11 dwts.—Working cost. Mines (including maintenance) 1s. 2 25d. per ton, milling (including maintenance) 3s. 0 68d. per ton. General charges (including maintenance) 1s. 2d. per ton, mine development redemption 4s. Total £1 74. 2 11d. Value of yield 1s. 2 25d. Balance 8s. 11 32d. Cyanide working (including maintenance) 4s. 52d. per ton, value of yield 1s. 10 28d. per ton, balance, 1s. 5 74d.

COWARD'S DIRECTORY OF SECRETARIES.—Mr. Edward Coward, Editor of *The Rialto*, has compiled and edited a book which must immediately meet with general favour. It certainly supplies a much-felt want, and for that reason alone must be most acceptable. Naturally, it cannot be as complete as it might be. But its deficiencies are not obtrusive, and the author has done his work with exceptional success. We note that it is intended to publish it as an Annual; therefore, there will be plenty of opportunity for supplying omissions.

BAYLEY'S REWARD NO. 1 SOUTH.—Mining report, dated Coolgardie, December 9:—Main shaft. We are still unable to do any work at the 170 feet level, in consequence of the water which raised to the back of the chamber during the time work was suspended. We cannot afford to haul this to waste, but are at present using it for the battery, and selling all we can to the Reward Company at the usual price 2s. 6d. per 100 gallons, and by the end of the present week should be getting pretty 1¹/₂w. -120 feet level. North drive has been driven 4 feet, total 119 feet from shaft, lode is rather small in face giving every indication of pinching again, but probably will resume its usual size in a few feet of driving at present showing some very nice gold.—Stoops. Stoops in the back of the north drive continue from 2 feet to 3 feet wide, in places containing very good gold, taken in bulk will probably prove good average grade stone.—Boiler. The boiler from the Reward winding engine has been removed and connected to your winding plant, enabling us to resume crushing, but during the week we have been quite unable to procure sufficient fresh water for the boilers, to-day we are getting in a fair stock, consequently the battery will be more constantly employed, and I think that after this week we shall be able to obtain sufficient stone from the public to keep five stampers employed for some time if required, —(Signed) W. H. Matthews.

BREMNAES.—The directors have received the following report from the mine, dated Haugesund, January 13:—Kivig Mine. In the rise in back of 500 north we have about 30 inches of good quality quartz. We shall communicate this rise with the winze, sinking from 400 level, during the present week. The quartz in the 300 north end holds a width of 18 inches. A little galena and copper pyrites is being met with. An average sample of the lode assayed nearly 6 dwt. gold to the ton. A stope working in back of 300 north has a quartz lode 4 feet in width. A run of quartz on the footwall is well mineralised, and shows by assay gold value 10 dwt. to the ton. But slight change is noticeable in the 200 south level. Just now the men are following the western branch of the lode, where the quartz is improving both as to width and value. The 100 feet south level is carrying 10 inches of good mill quartz, and good quality quartz is being stopped in bottom of same level.—Gapleshog Mine. The quartz in bottom north level has a width of 15 inches, and is increasing. The lode carries galena and copper pyrite, and stones showing coarse gold have, during the past week, been broken from the working. A stope above this level is giving quartz of like good quality as level. Stopes working north and south of rise in back of No. 1 north level shows quartz 10 inches and 2 feet respectively. The quartz is of good mill quality, especially that being broken in the north stope.—Fladenes Mine. There is a strong and well-defined lode in the open cutting, with quartz 3 feet wide. The tram-line erection is well forward, and I anticipate completing same within the month.

CRAVEN'S CALEDONIA.—The following fortnightly report has been received from the mine, dated Charters Towers, December 5:—In the underhand stope from No. 8 old level the reef is about 7 inches thick, and in the stope at the end of the crosscut the reef is about 6 inches thick. In the stope over the crosscut the reef is about 9 inches, and in the three stopes over the old No. 8 level the reef averages about 9 inches. In the first two stopes over the hanging-wall, reef is the same as last reported on; in the other one stope the reef has improved in quality. No. 7 crosscut has been extended a further distance of 9 feet, making a total of 143 feet from the starting point. Bunce and party have about 2 tons of stone from the stalling over No. 7 old level. Hooper and party have extended No. 6 level a further 5 feet, making a total of 16 feet from the starting point. They are making fair progress with their tribute. Bowater and party have extended No. 5 level a further 2 feet, making a total of 13 feet from starting point, and this part have put through a crushing at the Prudence mill during this fortnight of 29 tons for a yield of 46 ounces of retorted gold. Slade and party have got about 10 tons from the stalling, and 3 tons from the underhand stope off No. 6 level, making a total of 13 tons. The haulage of quartz for the company for this fortnight is 30 tons, making a total of 138 tons, which has been carted to the Prudence mill, and the result will be on Saturday the 7th.

COLOMBIAN HYDRAULIC.—T. P. Sharman, December 4 : Run No. 204. After washing 1120 hours, of which 745 were in the Pipe-clay mine, 54 opening a way for the pipes, and 324 on the north side of Clarke's banks, we cleaned up on October 19 a total of \$9493, or about £1898 at a cost of about £1480. Of the gold we obtained from the Pipeclay mine, \$3246; from the new opening, \$2482; from the Aguas Claras undercurrent, \$1000; from drifting, \$2765. It will be seen that the 324 hours on the north side of Clarke's banks were spent in opening a way for the pipes, and in getting the water to the mine.

will be seen that the result from the new opening is satisfactory.

COROMANDEL.—Superintendent's report for fortnight ending December 28: Prospect shaft. This shaft has been sunk since last report 20 feet 6 inches, its total depth being now 551 feet.—500 feet level south. The crosscut east of this level has been driven 22 feet, total length 325 feet. A few small stringers of quartz have been passed, but the end is again in hard black schist.—200 feet level north. The drift north-east from winge has been extended 5 feet 6 inches, total 10 feet 6 inches. Lode 1 foot 6 inches wide, worth 8 dwts. of gold per ton. 100 feet crosscut west driven 13 feet

worth 6 dwt.s of gold per ton. 100 feet crosscut west driven 15 feet 6 inches, total 33 feet 6 inches, without further discovery.—East shaft. The 600 feet level south of wings has been driven 28 feet 6 inches. The lode has varied from 2 to 3 feet wide, and the average value is half an ounce of gold per ton. This is a strong well-defined lode, and seems likely to improve. 320 feet level north driven 25 feet, total 291 feet. Lode is 2 feet wide, of mixed character, with broken walls, assay value 3 dwt.s. 12 grains of gold per ton. 200 feet level north driven 44 feet, total 282 feet. The lode followed has been very changeable, at one point averaging 1 foot 6 inches of quartz, worth over 2 ounces of gold per ton, while in the present end it is split into branches which are of no milling value. 100 feet crosscut east driven 15 feet 6 inches, total 50 feet 6 inches. No discovery.

GROOTFONTEIN.—The manager reports that he has now succeeded in forming a second small gang of Kaffirs, by the aid of which the prospecting work is now being energetically pursued. Another reef has been discovered in the limestone above the Blyde River, and not far from the site for the proposed bore hole. This reef measures from 12 inches up to 3 feet thick in thickness, and is estimated to contain about 8 dwts. of gold per ton by panning. Assays are being made of this ore.—Boring plant. On December 23 the boring plant was delivered on the ground. On the same day most of the timber required for the derrick was also unloaded.

GOLD FIELDS OF MYSORE.—Mine report for fortnight ending December 31 : South shaft. The 280 feet level end north, on West Balaghat lode, has been extended a further distance of 12 feet 9 inches, total 180 feet 6 inches from crosscut. The lode maintains its size (4 feet), the assay value of which is 2 dwt., 7 grains of gold per ton. The end driving south has been extended 10 feet 6 inches, making its total length 181 feet 6 inches from crosscut. The lode formation is 4 feet wide, which is composed chiefly of schistose rock carrying a small vein of quartz against the hanging wall, which gave by assay 15 grains of gold per ton.—Oriental lode. The 280 end north has been advanced 19 feet, total 245 feet 8 inches. The lode is 4 feet wide, carrying 1 foot of quartz, the assay value of which is 4 dwt., of gold per ton. Winze sinking under the level sunk 5 feet, total 15 feet 6 inches. Lode 3 feet wide, quartz, assaying 7 dwt., 8 grains of gold per ton. Winze in bottom of south level sunk 4 feet 6 inches, total 16 feet 6 inches. Lode average 1 foot 6 inches, of mixed rock, assaying 4 dwt., of gold per ton. Stopping side of intermediate drive stopped 5 fathoms. Quartz 10 feet wide, assaying 6 dwt., 7 grains of gold per ton.—The 380 feet level north. No. 1 rise risen 6 feet 4 inches, total 68 feet. Lode 3 feet wide, of mixed rock, assaying 2 dwt., 7 grains of gold per ton. No. 2 rise risen 7 feet, total 84 feet above the level. This rise is going up on a broken division on the line of the middle shaft. The crosscut west has been lengthened a further distance of 12 feet, making its total length 140 feet. It has during this drive traversed several small veins of calcareous matter of no value. The ground in the forebreast at present is of a mineralised nature, and hopes are entertained of meeting with something of value here. The 380 south level No. 1 rise risen 7 feet 4 inches, total 57 feet 8 inches. Lode 2 feet wide, quartz, assaying 1 ounce 3 dwt., 5 grains of gold per ton. Stone

over the level south of the above rise stopeed 2 fathoms 2 feet 4 inches. Lode 6 feet wide, quartz, assaying 3 dwt. 15 grains of gold per ton. The 470 feet level raising roof of level south 29 feet has been accomplished during the month. The lode is 2 feet wide, assaying 5 dwt. 2 grains of gold per ton.—South shaft. This has been sunk 3 feet 8 inches, making its total depth 13 feet 10 inches below the 470 feet level. The lode is 2 feet 6 inches wide, averaging 11 dwt. 7 grains of gold per ton.—Middle shaft. Fair progress being made with the depository for water, and 7 feet 4 inches have been sunk, and 11 feet 6 inches driven to form the same. Prospecting shaft in Golconde block sunk 11 feet 2 inches, total depth 6 feet 8 inches. The ground in the bottom of the shaft has become much harder, and it is not so highly charged with the ferruginous matter. An assay from this gave only a trace of gold.

GREAT SOUTHERN TIN AND GOLD FIELDS.—Mining manager's report, Toors, Victoria, Australia, December 7: Great progress has been made at the south end of tunnel during the last fortnight, the rock anticipated being much easier for driving. In the cutting at the north end of tunnel there has been a slight slide of the rock near the working face, owing to the heavy rain storm, loosening it before we could get it boxed in, and the clearing off this has lost us a day or two's work. We have now only about 30 feet more of cutting to complete, when we shall be able to commence the north end of tunnel, which will have 13 feet of solid ground above it. On going over the ground between the north end of the tunnel and the head of the race and re-levelling same, I find it till be possible to shorten the length of this portion of the race by 12 or 15 chains and to do away with one flume—No. 5 on the plan, 1 chain less length. Distance driven for past fortnight in south end of tunnel 29 feet. Distance driven for past fortnight in north cutting 32 feet. Tunnel completed at south end a total distance of 709 feet. Cutting completed and boxed in at north end a total distance of 353 feet. The tin sand obtained at the test on November 13 last, ex Australia January 2, has been assayed by Messrs. Johnson and Sons, assayers to the Bank of England, who certify its yield as:—Fine gold, 5

KEMPINKOTE.—Superintendent's report for fortnight ending December 30: Garland's shaft. Crosscut west 500 feet from surface has been driven 21 feet 6 inches, total distance from shaft 29 feet 6 inches. About 20 feet west of shaft the lode was met with. We have about 5 feet of the footwall part of the lode in the end assaying 1 dwt. of gold per ton. 345 north drive has been driven 1 foot, total distance from main crosscut 227 feet 6 inches. About 222 feet north of main crosscut the footwall was met with. In the end we are carrying about 2 feet of the footwall part of the lode assaying 1 dwt. of gold per ton. 345 north drive No. 1 crosscut east has been driven 8 feet 3 inches, total distance 75 feet 6 inches. With the exception of a small layer of schist, the lode in the end is the full size of the drive, assaying 1 dwt. of gold per ton. 345 south drive has been driven 2 feet 6 inches, total distance from main crosscut 286 feet 6 inches; no change.—345 No. 2 crosscut east, 286 south of main crosscut has been driven 13 feet 6 inches, total distance 13 feet 6 inches. The end is in schist.—245 north drive No. 2 winze. At the bottom of the winze 50 feet below No. 1 crosscut west we have crosscut east 8 feet, total distance 8 feet. The lode in the end is the full size of the drive, assaying 1 dwt. 12 grains of gold per ton. 245 south drive has been driven 13 feet 6 inches, total distance from main crosscut 531 feet. We are carrying about 5 feet of the footwall part of the lode, assaying 12 grains of gold per ton. 245 south drive No. 3 crosscut west has been driven 10 feet, total distance 24 feet. There is no change in the ground in the end.—183 south drive No. 2 crosscut east. 180 feet south main crosscut has been driven 12 feet, total distance 12 feet. The lode in the end is the full size of the drive, assaying 1 dwt. of gold per ton.—Henty's shaft. 341 south drive has been driven 18 feet 9 inches, total distance from main crosscut 140 feet 9 inches. About 13 feet south of main crosscut we met with the footwall. There is about 1 foot of the footwall part of the lode in the end, assaying 1 dwt. of gold per ton.

LINDSAY'S EXTENDED EAST GOLD.—Progress report for the four weeks ending December 12: During the above period we have sunk 8 feet, driven 28 feet. We have actually sunk more than above, but owing to sudden influx of water could not measure up. No. 2 underlay shaft is where the water has come in. Have had to stop sinking and erect horse-whip and make a bucket road down the shaft so as to be able to bale. The last stone raised just as the water came in showed a little gold. Shall endeavour to sink deeper, and ultimately open a level and drive north along course of reef. There is now about 27 feet of water in the shaft, but I do not yet know what the daily flow is. I shall require a pump here as soon as I see that the flow is strong enough.—No. 3 underlay. No change here, and am going to stop farther prospecting at this point. Down to about 30 feet I have exposed a strong body of stone which carries gold, and which I shall test in bulk by crushing as soon as the Lindsay's Company's machinery is ready to take it.—Main shaft. I purpose sinking a main shaft at about 200 feet north of No. 2 underlay to cut the reef at 200 to 300 feet depth. This is justified by the prospects in No. 2.

MYSORE WEST AND MYSORE WYNAAD CONSOLIDATED.
DATED.—**Tank Mine:** Monthly report for December. South shaft: The 507 crosscut west has been driven in 53 feet 3 inches from the shaft, progress 53 feet 3 inches. Strings of quartz are just appearing in the end, but we do not expect to cut the lode for some 10 or 12 feet more. From this crosscut we have turned a machine to cut a short level to the south, and from this we shall stopes out the plateau. The level has been cut in to a distance of 10 feet. 450 north has been driven to a distance of 451 feet, making a progress of 28 feet 3 inches. The end is now letting down a great deal of water, and the lode matter has widened to $3\frac{1}{2}$ feet, in which there is about 18 inches of quartz, worth 8 dwts. per ton. Stopes south of No. 2 rise is 2 feet wide, and worth 1 ounce 2 dwts. of gold per ton. Stopes north of No. 2 rise is $3\frac{1}{2}$ feet wide, worth 5 dwts. per ton.—450 south. A winze has been started below the rise in this level, and has been sunk 7 feet 3 inches. The lode here is $3\frac{1}{2}$ feet wide, and worth 4 dwts. per ton. Intermediate north was holed at 233 feet to 450 north No. 1 rise. The intermediate north stope is 3 feet wide, and worth 10 dwts. per ton.—354 rise. The ground not improving this was stopped at 26 feet 3 inches. The new mill will be ready to start in two days when the old mill will be stopped and the framework repaired before starting again. The mill ran 655 hours and crushed 550 tons, which yielded 538 ounces of bar gold.

MOUNT LYELL MINING AND RAILWAY.—Mine manager's report for week ending December 6: South drive, No. 3 tunnel. The face has been advanced 5 feet, making the total length 515 feet. Pyrites harder than usual.—South drive, No. 4 tunnel. The drive has been advanced 8 feet, making the total length 428 feet.—No. 5 tunnel, 3 feet have been driven, total 1158 feet. Country intensely hard black rock. Crosscutting the pyrites has been commenced.—Progress report for week ending December 6: Hauling line. Cutting at mine terminus well in hand.—Smelter building. Frames of extension bins north nearly completed, roof trusses over stoves and boilers in place, laying floors of bins and platforms, &c.—Bin approaches. Embankment completed to trestles.—Crusher house. Excavation completed.—Hill face. Nearly finished up to last ascent, 44 feet from chimney, floor in progress.—Main chimney, Resumed height above grade 77 feet.—Blowers. Foundation of No. 1 in progress.—Converter site. Prepared for masonry, quarry tram prolongation to smelter floor in hand.—Repair shop. Nearing completion. All construction plants at work. Weather mostly fine.—Railway engineer's report, fortnight ending December 7: Contract No. 24. The earthworks are now completely in progress from the 15 mile camp to junction of contract 23, and very good progress being made. The measurements for this day show a total quantity of 40,000 yards of earthwork excavated and removed since commencement.—Bridge work. Four piers of double-barrel Creek Bridge are in position, and we are now waiting farther supplies of timber to complete this work. Foundations for the next three bridges are completed, designs prepared, timber ordered.—Contract No. 23. Taring and painting of King Bridge in progress. Removing batters of cutting at White Cliffs, near Camp Spur; about 400 men employed upon the works. Weather fine with few wet days.—Caffney and Harvey's contract. Work in progress for 40 chains at

the Queen end and 20 chains at the crossing end. 60 men employed and good progress being made.

NO. 7 NORTH-EAST QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers, December 6: Acting under your instructions I have had the No. 1 level cleaned out, and a truck to carry out the water formed in the footwall. This has not taken up the whole of the water, but the greater part of it. On the 4th instant Balch and party cleaned up the proceeds of their crushing; 34 tons 15 cwt., for 38 ounces 19 dwt., 6 grains of smelted gold. They are now driving on from 10 to 18 inches of stone of good quality. Ferguson and party in No. 3 east level struck stone in their rise at a point 41 feet from the level, and have since gone up another 5 feet on from 12 to 15 inches of heavy mineral stone. Kemp and party gave up their block in No. 3 level yesterday. To-day Wherry and party cleaned up from 23 tons 16 cwt., for 420 ounces 4 dwt., 12 grains of smelted gold. They have from 10 inches to 2 feet of stone in the face at present of equal quality to the lot crushed.—Jordan and party. The stone is still very small with this party, only about 2 inches thick, and of medium quality. Hamilton and party are working on from 2 to 6 inches of stone of good quality. For the fortnight we have hauled 41 tons 10 cwt., of quartz.—(Signed) John T. L. Williams.

OREGUM.—Superintendent's report for the fortnight ending January 1: Taylor's shaft sunk 11 feet, depth below the 860 foot level 39 feet. Lode 6 inches wide, assay value 12 dwt. The 760 foot level south driven 29 feet 3 inches, total 476 feet. Lode 4 inches wide, assay value 2 ounces 6 grains. No. 1 winze 760 foot level south sunk 8 feet 6 inches, total 62 feet. Lode 8 inches wide, assay value 1 ounce 2 dwt. 21 grains. No. 2 winze 760 foot level south sunk 7 feet 3 inches, total 51 feet 9 inches. Lode 2 feet wide, assay value 2 ounces 5 dwt. 17 grains. No. 3 winze 760 foot level south sunk 4 feet, total 15 feet 9 inches. Lode 10 inches wide, assay value 2 ounces 3 dwt. 13 grains. No. 2 rise 760 foot level south risen 9 feet 6 inches, total 52 feet. Lode 1 foot 2 inches wide, assay value 2 ounces 15 dwt. 13 grains. The 660 foot level south driven 13 feet, total 511 feet 6 inches. Lode 9 inches wide, assay value 1 ounce 1 dwt. 19 grains. No. 2 winze 660 foot level south sunk 4 feet 9 inches, total 59 feet 3 inches. Lode 6 inches wide, no sample. No. 3 winze 660 foot level south sunk 3 feet 3 inches, total 32 feet. Lode 8 inches wide, assay value 1 ounce 6 dwt. 2 grains. No. 3 winze 560 foot level south sunk 2 feet 3 inches, total 83 feet. Lode 6 inches wide, assay value 10 dwt. 21 grains. Wallroth's shaft sunk 10 feet 6 inches, total depth 1130 feet. The lode formation is very small, chiefly quartzite, no sample taken. The 1060 foot level south driven 18 feet, total 164 feet 9 inches. Lode 4 inches wide, assay value 7 dwt. 15 grains. The No. 1 winze 1060 foot level south commenced, sunk 7 feet 6 inches. Lode small, no sample. The 1060 foot level north driven 17 feet 9 inches, total

Lode 1 foot 3 inches wide, assay value 6 dwt. 12 grains. No. 1 winze 1090 feet level north commenced, sunk 12 feet 6 inches. Lode 1 foot wide, assay value 4 dwt. 8 grains. No. 1 rise 1060 feet level north commenced, risen 13 feet 3 inches. Lode 9 inches wide, assay value 5 dwt. 10 grains. The 960 feet level south driven 24 feet 9 inches, total 606 feet 6 inches. Lode 6 inches wide, No sample taken. No. 1 winze 960 feet level south sunk 3 feet 9 inches, total 72 feet 6 inches. Lode 6 inches wide, assay value 3 dwt. 6 grains. No. 2 winze 960 feet level south sunk 6 feet, total 54 feet. Lode 4 inches wide, assay value 4 dwt. 8 grains. No. 3 winze 960 feet level south commenced, sunk 5 feet 9 inches. Lode 6 inches wide, assay value 6 dwt. 12 grains. No. 1 winze 960 feet level north sunk 7 feet 9 inches, total 62 feet 9 inches. Lode 1 foot 6 inches wide, assay value 5 dwt. 10 grains. The 860 feet level south driven 34 feet 9 inches, total 934 feet 6 inches. Lode 1 foot wide, assay value 2 dwt. 4 grains. No. 3 winze 860 feet level south sunk 5 feet 3 inches, total 96 feet 9 inches. Lode 1 foot wide, assay value 9 dwt. 19 grains. No. 4 winze 860 feet level south sunk 7 feet 3 inches, total 74 feet 6 inches. Lode 2 feet wide, assay value 5 dwt. 10 grains. No. 5 winze 860 feet level south commenced, sunk 4 feet. Lode 1 foot wide; no sample. No. 3 winze 760 feet level south 8 feet 6 inches, total 91 feet. Lode 2 feet wide, assay value 4 dwt. 8 grains. No. 6 winze 760 feet level south sunk 8 feet 3 inches, total 55 feet. Lode 2 feet wide, assay value 7 dwt. 15 grains. No. 2a rise 760 feet level south risen 11 feet, total 75 feet. Lode 1 foot 6 inches wide, assay value 6 dwt. 12 grains. No. 6 winze 660 feet level south resumed, sunk 3 feet, total 27 feet. Lode 1 foot 6 inches wide, assay value 8 dwt. 17 grains. Level north from crosscut east 460 feet level south driven 14 feet 6 inches, total 147 feet 6 inches. Lode 6 inches wide, assay value 6 dwt. 12 grains; suspended. No. 1 winze level north from crosscut east 460 feet level south sunk 7 feet 6 inches, total 22 feet 9 inches. Lode 2 feet wide, assay value 1 ounce 13 dwt. 18 grains. Low's shaft sank 8 feet, total 810 feet 10 inches. This being down for the 810 feet level, arrangements have been made to commence it by driving south for plat. When this is completed a crosscut will be put out to intersect the lode with all speed possible. The 710 feet level south driven 13 feet, total 227 feet. Lode 1 foot 6 inches wide, assay value 6 dwt. 14 grains. No. 1 winze 710 feet level south sunk 8 feet, total 51 feet.

Lode 3 feet 6 inches wide, assay value 4 dwts. 10 grains. No. 1 winze 710 feet level south driven north on lode from point or intersection, sunk 5 feet 9 inches, total 29 feet 9 inches. Lode 1 foot 6 inches wide, assay value 6 dwts. 12 grains. No. 1 rise 710 feet level south driven north on lode from point of intersection, commenced, risen 10 feet 6 inches. Lode 2 feet 6 inches wide, assay value 8 dwts. 17 grains.—Probyn's shaft. The crosscut east 1150 feet level north extended 7 feet, total 51 feet 6 inches. The level east of south 1050 feet level south driven 10 feet, total 88 feet 6 inches. Lode 6 inches wide, assay value 8 dwts. 17 grains. No. 1 winze 1050 feet level north sunk 3 feet 9 inches, to a' 90 feet 6 inches. Lode small, carrying a branch of quartz 2 inches wide, which gave by assay 6 dwts. 12 grains of gold per ton. No. 1 winze 960 feet level south sunk 5 feet, total 111 feet 9 inches. Lode 1 foot wide, assay value 4 dwts. 8 grains. No. 4 rise, 550 feet level south, risen 12 feet 3 inches, total 41 feet 6 inches. Lode 1 foot wide, assay value 1 ounce 12 dwts. 16 grains.—Stopes for the month of December. Taylor's shaft. Back of 760 feet level south stope 30½ fathoms. Lode 3 feet 10 inches wide, assay value 3 ounces 8 dwts. 22 grains. Bottom of 560 feet level south stope 49½ fathoms. Lode 2 feet 3 inches wide, assay value 1 ounce 5 dwts. 1 grain. Bottom of 460 feet level south stope 61½ fathoms. Lode 3 feet 7 inches wide, assay value 13 dwts. 21 grains. Back of 460 feet level south stope 6½ fathoms. Lode 2 feet 6 inches wide, assay value 1 ounce 14 dwts. 20 grains. Bottom of 360 feet level south stope 16½ fathoms. Lode 2 feet 6 inches wide, assay value 13 dwts. 2 grains. Bottom of level south from back of No. 4 rise, 280 feet level south stope 7½ fathoms. Lode 2 feet wide, assay value 4 ounces 9 dwts. 5 grains. Bottom of level north from back of No. 4 rise, 280 feet level south stope 7½ fathoms. Lode 1 foot 6 inches wide, assay value 4 ounces 7 dwts. 2 grains.—Wallroth's shaft. Back of 760 feet level south stope 15½ fathoms. Lode 3 feet 3 inches wide, assay value 1 ounce 8 dwts. 20 grains. Bottom of 660 feet level south stope 3 fathoms. Lode 2 feet wide, assay value 1 ounce 8 dwts. 7 grains. Back of 660 feet level south stope 20½ fathoms. Lode 2 feet wide, assay value 13 dwts. 2 grains. Bottom of 660 feet level north stope 7½ fathoms. Lode 1 foot 9 inches wide, assay value 8 dwts. 3 grains. Bottom of 560 feet level south stope 22 fathoms. Lode 4 feet 4 inches wide, assay value 1 ounce 11 dwts. 13 grains. Back of 560 feet level south stope 36½ fathoms. Lode 2 feet wide, assay value 1 ounce 8 dwts. 14 grains. Bottom of 560 feet level north stope 16½ fathoms. Lode 1 foot 9 inches wide, assay value 1 ounce 13 dwts. 5 grains. Bottom of 460 feet level south stope 20 fathoms. Lode 1 foot 3 inches wide, assay value 15 dwts. 12 grains. Back of 460 feet level south stope 4 fathoms. Lode 3 feet wide, assay value 10 dwts. 20 grains. Back of level south from crosscut east, 460 feet level south stope 7½ fathoms. Lode 1 foot 6 inches wide, assay value 7 dwts. 1 grain. Bottom of 460 feet level north stope 5½ fathoms. Lode 2 feet 6 inches wide, assay value 9 dwts. 9 grains. Bottom of 360 feet level south stope 30½ fathoms. Lode 1 foot 6 inches wide, assay value 1 ounce 14 dwts. 3 grains. Back of 360 feet level south stope 1½ fathom. Lode 3 feet wide, assay value 2 ounces 3 dwts. 13 grains. Bottom of 360 feet level

north stoped 9 fathoms. Lode 1 foot 4 inches wide, assay value 8 dwt. 3 grains. Bottom of 280 feet level south stoped 6 fathoms. Lode 1 foot 7 inches wide, assay value 1 ounce 3 dwt. 23 grains. Bottom of 215 feet level north stoped 40 fathoms. Lode 1 foot wide, assay value 1 ounce 3 dwt. 4 grains. Back of 215 feet level north stoped 4 fathoms. Lode 1 foot wide, assay value 10 dwt. 21 grains.—Low's shaft. Bottom of 610 feet level south stoped 14 fathoms. Lode 1 foot 10 inches wide, assay value 9 dwt. 6 grains. Back of 610 feet level south stoped 3 fathoms. Lode 1 foot 6 inches wide, assay value 4 dwt. 10 grains. Bottom of 510 feet level south stoped 7 fathoms. Lode 1 foot wide, assay value 19 dwt. 1 grain.—Probyn's shaft. Back of 550 feet level south stoped 4 fathoms. Lode 3 feet wide, assay value 3 dwt. 6 grains.—Exploratory work. Taylor's shaft. Crosscut west 460 feet level south extended 10 feet 9 inches, total 37 feet 9 inches. No change to notify.—Wallroth's shaft. No. 1 crosscut east 280 feet level south extended 3 feet, total 20 feet 4 inches. No discovery; suspended.

ALAMILLOS.—Report dated January 15: The 40 fathom level driving east of Santa Agueda shaft is opening up good stoping ground. In this level the lode is valued at 2 tons per fathom. In the 70 fathom crosscut north of San Felipe's shaft the lode will soon be intersected. The lode in the 85 west of Taylor's engine shaft is producing stones of lead. In the 160 west of the same shaft the lode is small and unproductive. The 100 east of Judd's engine shaft continues to open out well, and the lode is now valued at 3 tons per fathom.

CHAMPION REEF.—Fortnightly report of Captain James Rowe, superintendent, dated December 30:—Dalyell's shaft. This shaft has been stripped down 17 feet 6 inches, total depth 837 feet.—Garland's shaft. This shaft has been sunk 5 feet, total depth 988 feet 6 inches. Lode 2 feet wide, assaying 1 ounce 16 dwt. 16 grains of gold per ton. The 940 feet level north has been driven 29 feet 9 inches, total length 316 feet. Lode 5 feet wide, assaying 1 ounce 15 dwt. of gold per ton. No. 2 rise in back of level risen 18 feet 6 inches, total height 23 feet. Lode 4½ feet wide, assaying 1 ounce 2 dwt. 14 grains of gold per ton. The 940 feet level south driven 25 feet 9 inches, total length 264 feet 3 inches. Lode 1 foot 9 inches wide, assaying 1 ounce 5 dwt. 15 grains of gold per ton. No. 1 rise in back of level risen 16 feet 3 inches, total height 66 feet 3 inches. Lode 1½ foot wide, assaying 12 dwt. 12 grains of gold per ton. The 840 feet level north has been driven 23 feet 9 inches, total length 717 feet 9 inches. Lode in end disordered by a hard bar of ground. No. 4 rise above level risen 9 feet, total height 104 feet 6 inches. This is communicated with the 740 feet level. No. 5 new rise above level (135 feet north of No. 4) risen 12 feet. Lode 2 feet wide, assaying 1 ounce 6 dwt. 12 grains of gold per ton. The 740 feet level north has been driven 25 feet 9 inches, total length 931 feet 6 inches. Lode 5 feet wide, assaying 1 ounce 12 dwt. 16 grains of gold per ton. No. 6 rise above level risen 15 feet, total height 55 feet. Lode 3½ feet wide, assaying 1 ounce 10 dwt. 12 grains of gold per ton. The 630 feet level north has been driven 3 feet 6 inches, total length 1056 feet 6 inches. The end having overlapped the 540 south of Ribblesdale's shaft was suspended, and a winze commenced to sink in bottom of level, which has been sunk 13 feet and communicated with rise in back of 540 south of Ribblesdale's shaft. No. 8 rise in back of level risen 4 feet 9 inches, total height 71 feet 6 inches; this is communicated with 530 north.—Ribblesdale's shaft. This shaft has been sunk 5 feet, total depth 680 feet 3 inches. Lode 9 inches wide, assaying 1 ounce 4 dwt. 22 grains of gold per ton. The 640 feet level north of shaft has been driven 19 feet, total length 279 feet. Lode 1 foot wide, assaying 1 ounce 5 dwt. 20 grains of gold per ton. The 640 feet level south of crosscut east of level south of shaft has been driven 28 feet 9 inches, total length 92 feet 6 inches. Lode 2½ feet wide, assaying 1 ounce 7 dwt. 2 grains of gold per ton. Rise above level risen 1 foot 3 inches, total height 23 feet. This has been suspended for a time. The 540 feet level south of east crosscut driven 3 feet 6 inches, total length 534 feet. This end being under the 630 north of Garland's is suspended. Rise in back of level risen 10 feet, and communicated with winze below 630 north of Garland's shaft. No. 3 rise above level risen 4 feet, total height 41 feet 6 inches. This is suspended for a time.—Carmichael's shaft. This shaft has been sunk 7 feet 3 inches, total depth below the 540 feet level 58 feet. Lode 1 foot 6 inches wide, assaying 1 ounce 9 dwt. 14 grains of gold per ton. The 540 feet level north of east crosscut has been driven 15 feet 9 inches, total length 281 feet 3 inches. This is in east and west dyke. No. 3 rise above the level risen 11 feet 9 inches, total height 41 feet 6 inches. Lode 1 foot 6 inches wide, assaying 1 ounce 12 grains of gold per ton. No. 2 rise above level risen 1 foot 3 inches, total height 77 feet 6 inches. This is suspended for a time. The 440 feet level north of east crosscut driven 8 feet 9 inches, total length 41 feet 9 inches. Lode 6 inches wide, assaying 16 dwt. 12 grains of gold per ton.—Rowe's shaft. This shaft has been sunk 7 feet 9 inches, total depth below the 515 feet level 87 feet 6 inches. Lode 1 foot wide, assaying 2 ounces 12 dwt. 12 grains of gold per ton. Winze below 515 north of shaft sunk 11 feet, total depth 61 feet 9 inches. Lode 3 feet wide, assaying 1 ounce 8 dwt. 18 grains of gold per ton. The 515 feet level south of shaft driven 19 feet 9 inches, total length 84 feet. This is in east and west dyke.—New vertical shaft. This has been sunk 16 feet, total depth 31 feet. We are now engaged timbering the shaft to this depth.—Stopes. The measurements of these not having been completed, the value and size of lode in each stope will be given in next report.

FORTUNA.—Mine reported dated January 15: Canada Incosa Mine. In the 110 fathoms level driving west of San Pedro's shaft, the lode is regular and well formed, valued at 2 tons per fathom.—Los Salidos Mine. The lode in the 212 east of Taylor's engine shaft has slightly declined in value; is now estimated at 2 tons per fathom. In the 200 east of the same shaft the lode continues unproductive. We have not met with anything of value in the 92 west of Palgrave's shaft.—Granero's winze sinking below the 200 fathom level. This winze is situated east of Taylor's engine shaft, and in advance of the 212 fathom level, valued at 1½ ton per fathom. The stope has not undergone any change of importance since last reported. Mining works are kept on with great regularity, and the machinery is in good working order. Estimated raisings for January 225 tons. The tributary's returns amounted to 48½ tons of mineral in the past month.

LINARES.—Report dated January 15: Pezo Ancho Mine, Warner's crosscut. In the 200 fathom level driving east the lode is wide but contains little ore. The lode in the 200 west is regular and well formed, but contains only spots of ore. In the 178 west the lode continues large and produces good stones of ore, and is valued at 2 tons per fathom.—Peill's engine shaft. The lode continues regular in the 200 west, but is unproductive at present. In the 155 west the lode is regular and compact, valued at 2 tons per fathom.—No. 279 winze sinking below the 155. The lode is large but does not contain any ore.—Los Quinientos Mine, Taylor's engine shaft. In the 200 crosscut driving south the men are making very fair progress towards the lode. The lode in the 185 east is a little more open and yielding good stones of ore, valued at 2 tons per fathom. During last week the 165 east has very much improved, and is now worth 2 tons per fathom. The lode in the 150 east is wide and strong with occasional lumps of ore, estimated at 2 tons per fathom.—Alfonso's winze sinking below the 130 fathom level. The lode is sufficiently large, but is not quite as productive as it was; it is now valued at 2 tons per fathom.

SULTAN (Coolgardie).—This company's manager at Coolgardie reports under date, December 16: Developments. North east drive on course of reef has been extended a further 5 feet, making total from shaft 64 feet. The reef in this end is the same size as last report—viz., 18 inches, and carries fine gold.—50 feet level. Southwest drive on course of reef has been driven a further 3 feet, making total from crosscut 71 feet. The reef here has opened out to a good body of stone, the width being fully 2 feet, and prospects of gold can be obtained by dollying.—Crosscut at 50 feet level, north-west, has been extended a further 7 feet, making total from shaft 48 feet. The country we have passed through is of a very kindly looking nature, and is full of small ironstone and quartz ledgers.

BAYLEY'S REWARD CLAIM.—Mining report dated Coolgardie, December 9: Report of the work done during the fortnight. Sylvester shaft. With the sinking of Sylvester shaft good progress has been made, it having been sunk a further depth of 13 feet, full depth now being 421 feet. Have also timbered and centred about 10 feet, and completed other necessary work in connection with it.—Crosscut at 380. The east crosscut from the end of the south drive at the 380 has been extended 3 feet, total 31 feet from drive. Ground is hard, but in places a little water dripping from the face.—West crosscut. The west crosscut at the same level has been driven 11 feet, the country rock being of a very close-grained nature. In consequence of some of the men leaving, work has not been constantly continued in either of these crosscuts, which accounts for the small amount driven.—Everard shaft. South drive from Everard shaft at the 100 feet level has been advanced 9 feet, total 28 feet from shaft. Lode is fully 5 feet wide, hard, solid, and well defined, but is still apparently of very low grade, which I am in hope will change as we continue further south.—Air shaft. The timbering of the air shaft has been completed and sunk a further depth of 9 feet, total being 75 feet from brace. Lode about 18 inches wide, of favorable character of stone.—(Signed) W. H. Matthews.

BENDIGO CONSOLS.—Extracts from manager's December report:—The main engine shaft is down 1035 feet, the repairing of this shaft has now been completed; have received from railway station new air pipes and tram rails, and have commenced to clean up the crosscut and level; are now busy putting in new air pipes, which will be completed by Monday next, have fixed rails and kick-up on brace tramway, repaired trucks, and making everything in readiness to start driving in face of 900 feet level by Tuesday next. During the week have tested the No. 1 boiler to a pressure of 70 lbs., the boiler stood the test splendidly. The Government Inspector of Mines paid a visit on Wednesday last, examined everything, and expressed himself satisfied. By continuing the driving at the 900 feet level the rich gold will, it is believed, soon be intersected. The whole of the machinery is working satisfactorily. The Victoria or No. 2 shaft is sunk to a depth of 360 feet, there is good stone at bottom of shaft, which will pay sufficiently to defray cost of sinking. Wilson's party working on tribute on the property 319 feet south from Old Poverty shaft, struck the lode 45 feet from the surface. The lode runs 45° west of north, is 4 feet wide, and carries gold in paying quantities, a trial crushing of 11 tons yielded 24 ounces 7 dwt. gold; the men are driving north and south on the reef, and are reported to be making now about £100 per week clear.

NEW KLEINFONTEIN.—Summary of operations for November: Mining and milling. Quartz mined 5823 tons of 2000 lbs., quartz melted (65 heads ran 28 days) 5823 tons of 2000 lbs., yielding smelted gold 1832 ounces 15·6 dwt. (average per ton 6·29 dwt.), realised £6643 17s. 1d.—Cost. Mining, hauling, and development £277d. per ton, crushing, sorting, and trammimg £3 43d., milling £2 22d., maintenance £6 08d., charges £1, 10·04d.: 5823 tons at 23s. 0·54d., equals £6709 14s. 10d.—Cyanide treatment. Tailings created 4460 tons of 2000 lbs., yielding smelted gold 693 ounces 1·80 dwt. (average per ton 3·10 dwt.) realised £1871 7s., equals £8615 4s. 1d.—Cost. 4460 tons at 3s. 10·64d. per ton, £866 14s. 11d., £7576 9s. 9d., profit for the month £938 14s. 4d.—Capital account. Expended on permanent mine £1115 9s. 9d., machinery and plant £2456 5s. 6d., buildings £2974 14s. 2d., live stock and wagons £14, furniture £66 15s. 9d., equals £6627 5s. 2d.—Mine. Total ore reserves on November 30, 77,360 tons. In consequence of the reef being considerably wider than was anticipated, the tonnage developed is heavily underestimated.—Development. Number of feet driven and sunk 385 feet, against 452·6 feet in October. Number of tons developed 8405, against 8065 in October.—East main incline shaft. This shaft is now down to the third level, and driving will be commenced forthwith. The main reef leader has been intersected in this shaft, assaying 3 ounces, over 18 inches.—West main incline shaft. This shaft will have reached the plane of the 4th level by the end of this month.

PAHANG-KABANG.—Myah, December 2: Report for December. Myah old adit. This month I put the men to continue driving on the slide, and 25 feet have been driven, total 41 feet past the small lode. For the first three weeks the country passed through was a hard grey slate, but the last 12 feet was in a soft blue slate. No lode of any kind has been cut, and I have now stopped this drive—Brand's adit. West. In this adit a short crosscut had been put out for 10 feet, and a little lode stuff was cut. I continued this crosscut 7 feet further, making the crosscut 17 feet, when we got fairly through the lode. From this point I commenced driving on the lode, and 27 feet has been driven. During the month the lode opened out to about 24 feet wide, and showed a trace of tin, but the lode in the end is only 6 inches wide, and without tin.—Top drive west. This has been driven 45 feet, total 165 feet. We have had no lode in this month's drive.—Winze. During the month the air in this winze has been exceptionally bad, and practically no work has been done. It appears that the recent heavy rain has brought down from the decaying trees a large quantity of carbonic acid gas, which has gone into the level and down the winze, so that after the 12 or 15 feet a light would not burn, and so it was impossible to work. At Baia there was a Root's blower; this I have taken and fixed in the mouth of the drive, but the pipes are not yet laid on. This air machine I expect to complete in a few days, when sinking will be resumed.—No. 3 drive east. The crosscut at this level has been extended 27 feet, total south 48 feet. During the driving of this we have intersected two droppers or small lodes about 3 inches wide, but without tin. The rock has been a mineralised blue slate, but other than the two droppers referred nothing has been cut.—Frederick John Rich.

TALISMAN.—The mine manager in his report of December 14 states: I am getting out stone from Nos. 1, 2, and 3 reefs. The amount of grass is about 600 tons, and this will average 2 ounces per ton.—No. 2 line of reef. This has the richest stone we have got so far, it dolries about 8 grains to the lb. (about 37 ounces per ton).—No. 3. Reef is 7 to 10 feet wide, and averages about 1 ounce per ton.—No. 1 reef. The lode is 25 feet wide, this I average at 12 dwt. I consider ½ ounce stone will pay well, as this will be the cheapest mine on the field to work.

UNITED GOLD FIELDS OF MANICA.—Rezende reef: The manager reports, November 30: Ore at grass. There is a large quantity of ore lying scattered in heaps along the line of the old excavations at surface. Every sample I have panned off shows free gold, some good and some bad, but as soon as the assay plant is erected I will be able to tell you more about it.—Assay and survey plant. A portion of the above has just arrived in Umtali, and I am having a little assay office erected to put it in. It will shortly be here, as well as the hand pumps. The manager cables, January 14: "Second shaft. The width of reef is 15 feet."

UNITED GOLD REEFS (Coolgardie).—Report from Mr. Wright, dated Coolgardie, December 11: Rita Nita. The main or No. 1 shaft has been sunk to a depth of 140 feet. No. 2 or air shaft is 60 feet deep. No. 3 or B shaft 32 feet. No. 4 or C shaft 28 feet deep. At 60 feet level the lode has been driven off from the Rita Nita shaft south through the air shaft to the Clyde boundary. The width of the lode at this depth is 15 feet from wall to wall. At the 30 feet level the drive has gone north from Rita Nita shaft 132 feet, and south to the air shaft. The width of the lode at this level is 12 feet from wall to wall. At the 120 feet level 60 feet have been driven along the lode north, the width being 30 feet from wall to wall.—Tatters. At the 68 feet level drives have been put north and south a distance of 45 feet each way, and a crosscut is now going west to prove the country on that side of the reef, as I am of opinion from appearances another reef is not far away. Exemption has been secured on 1145 (formerly 248), so as to concentrate labour on Rita Nita. On Block 6 two men are employed crosscutting for Bayley's No. 1 south reef.

WHEELER HILL.—Copy of monthly report from Francis H. Hill, superintendent, Chinese Camp, California, January 2: The tunnel is now 240 feet; have not struck the ledge yet, but expect to do so at any moment. We have found bunches of quartz in the country rock which has come from the ledge; it looks very well.

BRITISH BROKEN HILL PROPRIETARY.—Mining manager's report for the week ending December 11: Blackwood shaft. 300 level west crosscut extended 8 feet, total from plat 131 feet, face entering very hard mixed lode, material difficult to work. 200 level, No. 1 winze in No. 1 west crosscut sunk 4 feet, total depth 72 feet, bottom in hard milling sulphides. We picked out 3 tons sulphides, assaying 16 per cent. lead, 13 ounces silver, and 16 per cent. zinc. North drive off No. 1 west crosscut advanced 9 feet, total 38 feet, with good sulphide ore showing. We mined 35 tons sulphides, assaying 18 per cent. lead, 13 ounces silver, and 25 per cent. zinc. North drive of long crosscut in western extension lengthened 5 feet, showing fair milling sulphide ore, total length 63 feet.—Howell shaft. 300 level west crosscut extended 10 feet, total from plat 200 feet, face unchanged. South drive off east crosscut driven 3 feet, total 29 feet, showing fair milling sulphide ore; have stopped this drive for present. We mined 7 tons sulphides, assaying 37 per cent. lead, 11 ounces silver, and 20 per cent. zinc. 200 level, south drive off No. 2 west crosscut, advanced 9 feet, total length 72 feet, good sulphide ore showing the whole distance. We mined 44 tons sulphides, averaging 22 per cent. lead, 34 per cent. zinc, and 12 ounces silver. Winze in above south drive stopped. Are now crosscutting westwards in lode to reach hanging wall, when a winze will be sunk to 300 level. Crosscut now in 12 feet from drive all through splendid sulphide ore. We mined 11 tons sulphides assaying 24 per cent. lead, 13 ounces silver, and 22 per cent. zinc.—Junction 300 level. Nothing has been done in north drive since last report; are stopping all work here for the present.—Surface. All work on the new jiggling plant is being pushed ahead as speedily as possible, fair progress being made on erection of new change house near Howell shaft.—Ore shipments. Shipped during week 13½ tons (gross) sulphides to block 14 mine from main workings, assays not settled yet, also forwarded 20 tracks second carbonates from Marsh shaft to block 14 works, Port Adelaide.—Week's assays. Sulphides from 10 to 45 per cent. lead, 9·5 to 29 per cent. zinc, and 5·8 to 16·4 ounces silver per ton; carbonates, from 21 to 25 per cent. lead and 55·5 to 68 ounces silver per ton.

GOLDEN CEMENT CLAIMS.—The manager reports under date December 7: During the past fortnight our excavations have been as follows:—No. 2 shaft cross driven south 16 feet have not yet struck the reef at this point.—No. 3 shaft. The crosscut has been extended 6 feet east, but have not yet struck McAuliffe's reef, but might do so at any day, as I think we are just in the line of the reef.—No. 4 shaft. In this place we have put in wood, &c., for the western crosscut made in it, secured and driven the same 16 feet. In face of the drive there is a change of strata taking place; it may be that we are nearing a reef; should we strike anything I will let you know by wire. In the cement claims we have had the men taking out stuff for the battery. We have a pretty good stock in hand, and shall be able to keep the battery supplied for the trial crushing. We have done nothing in the past fortnight at the No. 1 or water shaft, but draw water for the battery, of which we have a good supply. In the coming week I intend to rework a trial shaft on the south of the water shaft near the Bissenberger Mine to try and discover their reef, which ought to be pretty near our trial shaft.

LINDSAY'S GOLD.—Progress report for the four weeks ending December 12. During the above period we have sunk 31 feet 6 inches; driven 11 feet 6 inches. At date the mine is looking promising. The rise above No. 1 level of No. 1 shaft has been put up total of 24 feet, and the reef has carried nice gold the whole distance. At date of report the reef shows 4 feet thick and shows nice gold all through. A sample of 8 lbs. stone unpicked, gave a return on being washed of 6 ounces 9 dwt. per ton. Shall continue rising on this schute. Have stopped following reef in east crosscut as have passed out of limit of gold-bearing stone. But am now sinking a winze to follow down the reef where it was rich. Am also continuing driving north from No. 1 shaft on this level as a little gold still shows in the face. I may get into something better soon. Am pushing on with No. 4 shaft, but have met with another hard bar of country, and progress consequently retarded. Total depth of shaft 185 feet. Shall crosscut east and west at 200 feet level. Dry crushing machinery. This is now in course of erection, and should be ready for work in a few weeks.—Water. Lindsay's East Company having struck a good supply of salt water, I have been able to erect a condenser capable of supplying the men, and thus can reduce the otherwise heavy expense of buying water. I shall have to build a much larger condenser in order to supply water for steam, and am arranging to do so.

KABOONGA.—Fortnightly report from the mine, dated December 17:—A rise 14 feet from the end of the south-west bottom level and 1830 feet from shaft has been started, and is up 18 feet in hard cemented country, which will be light on timbers. The rise goes up between the bore, which went up into gravel containing gold at 63½ feet over back of level, and that near face of drive which was stopped at 64 feet overhead in soft puggy reef. Contractors for 300 feet of branch deep level are now in 26 feet from start. This drive commences at 1160 feet from shaft and near No. 1 rise, and is being carried in west-north-west towards the deep channel (the main lead) touched by the Hepburn No. 1 company at a level over 30 feet shallower. Contracts have also been entered into for supplies of firewood, &c., and all works are being pushed on with vigour.

VIOLET CONSOLIDATED.—Under mail dated December 26 the manager writes as follows: Violet shaft. 3rd level east has been driven 12 feet, total distance driven from shaft 458 feet, 3rd level crosscut north 12 feet, total 153½ feet. 3rd level crosscut south 10 feet, total 122 feet. 3rd level west 7½ feet, total 750 feet. The reef is 3½ feet in thickness. 3rd level west, No. 1 rise, risen 17 feet, total distance risen 27 feet. 5th level west 7½ feet, total from shaft 250 feet. Reef 3 inches in thickness showing visible gold. 5th level east 8 feet, total 296 feet. Reef is 4 feet in thickness carrying a little visible gold. 6th level west 8½ feet, total 167½ feet. The reef is looking well, and is 2 feet in thickness. 6th level east 6 feet, total 237 feet. 7th level west 6 feet, total 1064 feet. The reef is looking well, and is 2½ feet in thickness. 7th level east 6 feet, total 103 feet. The reef at present is not well defined. 8th level west 5½ feet, total 1164 feet. 8th level east 5½ feet, total 111½ feet. The reef is very much broken up, but on the whole is looking well.—Flora shaft. 1st level east crosscut 10½ feet, total 113½ feet. 1st level west crosscut 7½ feet, total 100½ feet. The drive is continuing in sandstone. 1st level south 6 feet, total 16 feet. During the week a great change for the better has taken place in this drive; the beds are more settled and running regular. We are passing through a fine-looking reef at present, which on panning gives slight colours.—Middle Reef Violet shaft. The following are assay results of samples taken from the mine:—3rd level drive west 3 feet, 10 dwt. 5 grains gold per ton. 6th level drive west 6 inches, 3 ounces 3 dwt. 18

THE UNITED ASBESTOS CO. (Limited), DOCK HOUSE, BILLITER STREET, LONDON, E.C.



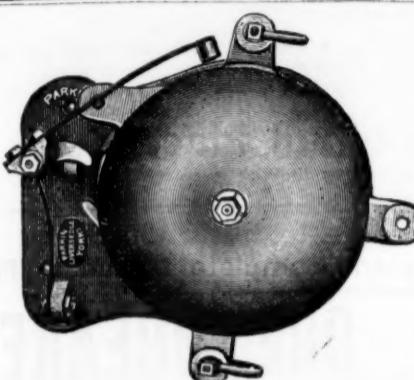
PIONEERS of the ASBESTOS Trade. The ONLY COMPANY in the WORLD owning and working Asbestos Mines both in ITALY and CANADA. All goods are made at our Works, near London, and are of the best possible description.

SPECIFY "SALAMANDER" BRAND.

Depots: NEWCASTLE-ON-TYNE, Quay Side; MANCHESTER, 34, Deansgate; LIVERPOOL, 33, James Street; GLASGOW, 93, Bothwell Street; CARDIFF, 135, Bute Street; BRISTOL, Provident Buildings, Clare Street; ST. PETERSBURG, Gostinno Dvor (interior), No. 51; ANTWERP, Rue Montevideo.

THE UNITED ASBESTOS PATENT "SALAMANDER" DECORATIONS.

PRICES ON APPLICATION.



EVERY OTHER WEEK.

These SIGNAL BELLS are the BEST and consequently CHEAPEST in the market.

All sizes from 4 in. to 12 in. for all purposes.
All fittings steel. No perceptible wear after years of work.
Simple neat and good. Thoroughly reliable.

Prices and particulars—

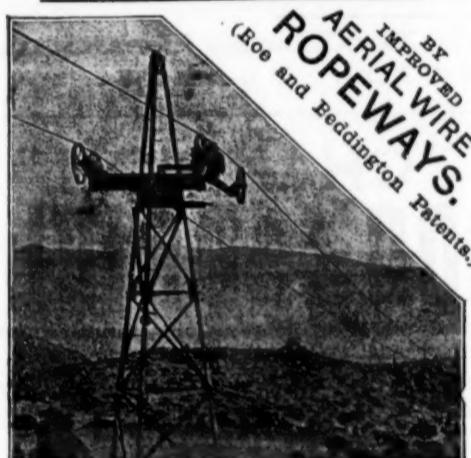
PARKIN, LIVERSEDGE, YORKSHIRE.

SOLE AGENTS FOR SCOTLAND:

Messrs. ARCHD. BAIRD and SON,
59-61, WATERLOO STREET, GLASGOW.

Export Agent—Mr. STEPHEN HUMBLE, Junr.,
Emerson Street, Southwark, S.E.

CHEAP TRANSPORT.



Advantages over other Systems:—

Economy in Cost and Working. Simplicity of Construction with High-Class Material. Long Spans and Steep Gradients Overcome. Reduced Wear of Cables, and Few Supports.

Estimates, Pamphlets, & full Particulars on Application to the PROPRIETORS OF THE PATENTS:
ROPEWAYS SYNDICATE, Limited.
150, Leadenhall Street, London, E.C.
Telegrams: "ROPEWAYS, LONDON."

THE GLASGOW HERALD
(ESTABLISHED 1782)

IN THE
LARGEST & LEADING ADVERTISING MEDIUM
OUT OF LONDON.

It is next to *The Times* and *The Daily Telegraph*, each of which it exceeds in extent of Advertising during several months of the year. It is unrivaled among Daily Papers for the completeness of its Reports of the Mining and Metal Markets, besides Commercial and General News for all classes of the community.

HEAD OFFICES: 65-69, BUCHANAN STREET, GLASGOW.
LONDON OFFICES: 65, FLEET STREET.

NORTH QUEENSLAND REGISTER

THE LEADING NORTH QUEENSLAND WEEKLY.
PUBLISHED AT CHARTERS TOWERS, NORTH QUEENSLAND.

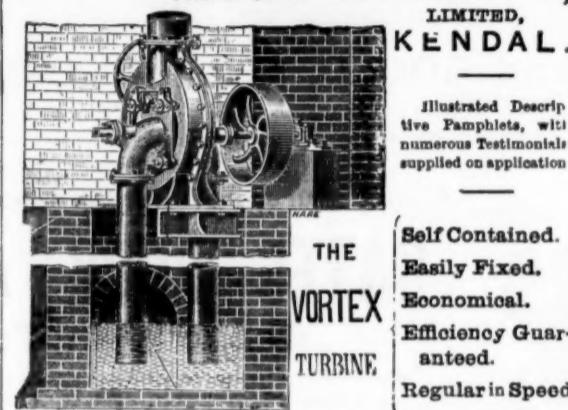
MINING A SPECIALITY.

Subscription £1 1s. per annum; including postage to Great Britain,
£1 5s. per annum.

Address communications to—
THE NORTHERN MINER PRINTING AND PUBLISHING COMPANY
CHARTERS TOWERS, QUEENSLAND.

PRIZE MEDALS { London, 1862.
Paris, 1867.
Calcutta, 1884.

G. GILKES & Co.,
LIMITED,
KENDAL.



Illustrated Descriptive Pamphlets, with numerous Testimonials supplied on application

Self Contained.
Easily Fixed.
Economical.
Efficiency Guaranteed.
Regular in Speed

LARGELY USED FOR ORE CRUSHING AND ELECTRIC LIGHTING, AND MILLS OF ALL DESCRIPTIONS.

THOS. W. WARD,
SHEFFIELD.

All sections light,
ana heavy.

Tracings with
Quotations.

RAILS
NEW and
SECOND-HAND.

ACCESSORIES
WRITE FOR LIST OF
Defective and Second-
hand RAILS.

JOISTS, GIRDERS, COLUMNS, &c.

Locomotives, Cranes, Boilers, Tanks, and
MACHINERY of every Description.

Buyer of SCRAP in all PARTS of the UNITED KINGDOM.

MACARTHUR-FORREST PROCESS.

TO MINE OWNERS AND OTHERS

Having REFRACTORIES GOLD ORES hitherto untreatable at a profit, the MACARTHUR-FORREST (PATENT) PROCESS OF GOLD EXTRACTION offers a solution of the difficulty.

The chief features of this Process are:—
SIMPLICITY, ECONOMY IN WORKING,
and SMALL COST of PLANT.

PROPRIETORS:—

The Cassel Gold Extracting Co. (Ltd.)

Head Office—108a, Hope Street, Glasgow.

London Office—23, College Hill, Cannon Street, E.C.

Africa—The African Gold Recovery Co. (Ltd.), Johannesburg.

Australia—The Australian Gold Recovery Co. (Ltd.), 8, Post Office Chambers, Sydney, N.S.W., Charters Towers, Queensland, and Mr. Geo. S. Fowler, J.P., Adelaide.

United States—The Gold and Silver Extraction Co. of America (Ltd.), Denver, Colo.

Mexico—The Mexican Gold and Silver Recovery Co. (Ltd.), 2a, Calle de Providencia, No. 7, Mexico City, Mexico.

Chili—Mr. J. A. W. Murdoch, Calle Almendro, Valparaiso.

New Zealand—The Cassel Gold Extracting Co. (Ltd.), 6, Herald Buildings, Queen Street, Auckland.

Canada—Mr. W. Pellew Harvey, F.C.S., 717 and 719, Pender Street, Vancouver City, British Columbia.

The CASSEL GOLD EXTRACTING Co. (Ltd.) are manufacturers of CYANIDE, suitable for the MacArthur-Forrest Process.

For terms, apply at Head Office of the Company,

108a, Hope Street, GLASGOW.

THE MONTAN ZEITUNG

For Austria, Hungary, and the Balkan States, Graz (Austria), has the largest circulation of any technical paper on the Continent, and

IS THE BEST MEDIUM

to advertise English Machinery and Appliances for

MINING, MANUFACTURING, AND ALL
INDUSTRIAL PURPOSES

throughout Austria, Hungary, Servia, Bulgaria, Roumania, Turkey, Montenegro, &c.

For general information and scale of Advertisements, apply to

F. MANSFIELD and CO.,
2, Lion Chambers, BRISTOL.

PUBLICATIONS.

** Prepaid Advertisements are inserted in this column at the rate of 8d. per line, with a minimum charge of 4s.

WORKS on MINING, METALLURGY, and
ALLIED SUBJECTS.

A Hand-Book of Gold Milling. By HENRY LOUIS.

A.R.S.M., F.G.S., &c. Crown 8vo., 10s. net.

The Golden Quartz Reefs of Australia. By WILLIAM NICHOLAS, F.G.S., with Illustrations. A series of Articles especially relating to the Bendigo Gold Field, Victoria. 2s. Post Free.

A New Guide to the Iron Trade, or Mill Managers' and Stock Takers' Assistant. By JAMES ROSE, of Batman's Hill Iron Works. Second Edition. Comprising a Series of New and Comprehensive Tables, practically arranged to show at one view the Weight of Iron required to produce Boiler Plates, Sheet Iron, and Flat, Square, and Round Bars, as well as Hoop or Strip Iron of any dimensions, to which is added a variety of Tables for the convenience of Merchants, including a Russian Table. 3s. 6d.

The Colliery Ready-Reckoner and Wages Calculator.

By JAMES IRELAND. 1s. 6d., Post Free.

Tacknote: a Form of Licence to Explore and Search for Mines. Minerals, &c. 1s., Post Free.

Notes on the Philippine Islands: A Pamphlet Reprint. By FRANK KARUTH, F.R.G.S. 6d.

History of the Holmbush, Redmoor, and Kelly Bray Mines: with Several Sections of the Workings. By W. F. WILKINSON 1s.

The Law of Merchandise Marks. By FRANK SAFFORD Of the Middle Temple, Barrister-at-Law, and a Member of the London Chamber of Commerce. 7s. 6d.

LONDON:

THE MINING JOURNAL,
18, FINCH LANE, E.C., and
3, DORSET BUILDINGS, SALISBURY SQUARE, E.C.

JUST PUBLISHED.

SECOND EDITION.
STANLEY'S TREATISE
ON
SURVEYING AND LEVELLING
INSTRUMENTS.

RE-WRITTEN UP TO DATE WITH NEW MATTER.
PRICE 7s. 6d., POST FREE.

E. and F. N. SPON, 125, STRAND, LONDON.

CORNISH POST AND MINING NEWS

A HIGH CLASS UNIONIST NEWSPAPER.

Specially devoted to Cornish Mining, upon which it contains the fullest and most reliable information published. It is the only eight-paged newspaper printed in the Mining Division of Cornwall.

ISSUED EVERY THURSDAY and SATURDAY,
PRICE ONE PENNY.

The Cornish Post and Mining News Co. (Limited)
East Charles Street, Camborne, Cornwall

THE WEST BRITON AND CORNWALL
ADVERTISER.

The best Family Newspaper for Cornwall and the West of England generally.

MONDAY AFTERNOON, 4 Pages, One Halfpenny.
TUESDAY AFTERNOON, 5 Pages, 56 Columns, One Penny.
The Largest and Most Influential Journal of Cornwall.
The Best Advertising Medium in the West of England.
The Largest Circulation of any Cornish Newspaper.
The "WEST BRITON" contains more reliable information respecting Cornish Mines than any other Newspaper.

HEARD and SONS, Publishers, Truro.

THE IRON AND COAL TRADES' REVIEW.

With which is Incorporated

The Bulletin of the British Iron and Steel Association.

The IRON AND COAL TRADES REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coal Owners, &c., in all the Iron and Coal Districts. It is, therefore, one of the Leading Organs for Advertising every description of Iron Manufactures, Machinery, New Inventions and all matters relating to the Iron, Coal, Hardware, Engineering, and Metal Trades in general.

Offices of the Review: 222-225, Strand, W.C.

Remittances payable to W. SHAW.

THE INDIAN and EASTERN ENGINEER.
AN
ILLUSTRATED WEEKLY JOURNAL
FOR
ENGINEERS IN INDIA AND THE EAST.

The INDIAN and EASTERN ENGINEER contains the latest and most authentic information on all subjects connected with Engineering enterprise in India and the East.

Correspondence invited on any subject which may be of interest to the profession.

RATE OF SUBSCRIPTION (payable in advance, including a copy of the INDIAN and EASTERN ENGINEER'S DIARY, and postage):—

Indian Rates. English Rates.

Yearly Rs. 20 | Yearly 40s.

Published at 137, Canning Street, Calcutta.

London Office: 28, Victoria Street, Westminster, S.W.

DELTA METAL
FOR ALL ENGINEERING WORK.

STRONGER AND MORE DURABLE THAN STEEL.

Specially Adapted for MINING WORK
on account of its very high Resistance to Corrosion.

DELTA

CAST, FORGED, STAMPED, ROLLED, DRAWN.

For full Particulars and Prices apply to

THE DELTA METAL COMPANY (Ltd.).
110, Cannon Street, London, E.C.

Telephones:—"Delta," London. Telephone No. 11392.

EASTON, ANDERSON, & GOOLDEN, Limited,

3, Whitehall Place, London, S.W.,

AND

JOHANNESBURG ... F. W. STOKER, Esq.

AUSTRALIA ... MESSRS. HARROLD BROS.

TASMANIA ...

SALISBURY FOUNDRY CO.

MANUFACTURERS OF

MINING MACHINERY of every description ELECTRICAL HAULING and WINDING PLANTS.

ELECTRICAL PUMPING PLANTS. ELECTRICAL ROCK DRILLS.

Plants have recently been supplied to the following amongst other Mines:-

THE CHAMP D'OR DEEP LEVEL GOLD MINING COMPANY.

THE CASSEL COLLIERY COMPANY.

VILLAGE MAIN REEF GOLD MINING COMPANY.

THE GOLD FIELDS DEEP.

METROPOLITAN GOLD MINING COMPANY.

MEYER AND CHARLTON GOLD MINING COMPANY.

ROODEPOORT DEEP LEVEL GOLD MINE COMPANY.

MAY CONSOLIDATED GOLD MINING COMPANY.

GEORGE GOCH GOLD MINING COMPANY.

SALISBURY JUBILEE JOINT MILL.

MOODIES GOLD MINING EXPLORATION COMPANY (LIMITED).

WITWATERSRAND GOLD MINING COMPANY.

FERRERA GOLD MINING COMPANY.

NIGEL GOLD MINE COMPANY.

Solo Manufacturers of the NIAGARA CRUSHER, PULVERISER, AND CONCENTRATOR. The most Successful MACHINE in the WORLD. A 5-foot QUARTZ MACHINE will do more and better Work than five head of STAMPS. Costs half the Price. Uses half the Power. Repairs do not exceed 2½ per cent. per annum on first cost.

Any Ore however hard is speedily reduced to a Uniform Power of any desired fineness, while the CONCENTRATOR SEPARATES THE VALUABLE ORE FROM THE MATRIX WITHOUT EXTRA POWER.

EASTON, ANDERSON, and GOOLDEN, Limited, 3, Whitehall Place, S.W.

Telegrams EGYPTIAN, LONDON.

Telephone: 3695.



EXTERIOR VIEW—Showing Crushing Head.

Manufacturers of Mining Machinery and complete Macadam Plants

GATES ROCK AND ORE BREAKER.

Capacity in Tons of 2000 Pounds.

Size 0—2 to 4 tons per hour.

Size 3—10 to 20 tons per hour.

Size 6—30 to 60 tons per hour.

" 1—4 to 8 "

" 4—15 to 30 "

" 7—40 to 75 "

" 2—6 to 12 "

" 5—25 to 40 "

" 8—100 to 150 "

Passing 2½ in. ring, according to character and hardness of material.

GREAT SAVING IN POWER. Adjustable to any Degree of Fineness.

The principle involved in this Breaker acknowledged to be the greatest success ever introduced into Stone Breaking machinery.

Send for Catalogue, containing over 500 references of Contractors, Miners, Railway Companies, Cement Makers, etc.

By the use of this machine cubical road metal can be produced at a low cost.

GATES IRON WORKS (A)

73a, QUEEN VICTORIA STREET, E.C., LONDON, ENGLAND.

136, Liberty Street, New York.

WORKS: 650, Elston Avenue, Chicago, U.S.A.

Improved Cornish Rolls & Screens.
COMPLETE CYANIDE PLANTS.

TONITE

IS RECOMMENDED TO CONTRACTORS, MINERS, PIT SINKERS, QUARRYMEN, AND OTHERS, AS BEING
THE SAFEST OF ALL EXPLOSIVES.

TONITE is a most efficient and economical blasting agent, and is largely in demand.
It is exempt from freezing and the consequent dangerous process of thawing.

THE COMPANY ALSO MANUFACTURE

GELIGNITE, BLASTING GELATINE, &c.

DETONATORS, Suitable for all Classes of Explosives.

ELECTRIC DETONATORS, High or Low Tension.

ELECTRIC APPLIANCES, of all Descriptions.

SAFETY FUSE.

Address—THE COTTON POWDER COMPANY (Limited),
116, QUEEN VICTORIA STREET, E.C.



TRADE MARK

Telegraphic Address: "PACKLESS, MANCHESTER." TELEPHONE No. 1496.

Cable Mills, Glasshouse Street, Oldham Road, MANCHESTER.

IMPORTANT NOTICE.

WE have for a number of years been receiving numerous complaints from our Representatives and Agents that buyers have been deceived into purchasing Packings which are called "Frictionless," under the impression that they were buying our manufacture, or Packing of the same quality as the "Electric-Frictionless." To protect ourselves, and in the interest of our customers, we have registered the word "KARMAL," and by this name only will Electric-Frictionless be known in future. The Packing will not be altered in the slightest degree, either in its manufacture or material.

THE FRICTIONLESS ENGINE PACKING CO.

LIMITED.

"CHAMPION" ROCK DRILLS

Have all the latest improvements resulting from 10 years' practical experience in constant work.

Unrivalled for efficiency and durability in Sinking Shafts, Driving Levels & Tunnels.



THE CHAMPION ROCK-BORER AND AIR COMPRESSOR CO.

SOLE PROPRIETORS AND MANUFACTURERS,
E. P. and H. P. VACHER,
MAKERS OF ROCK DRILLS, AIR COMPRESSORS,

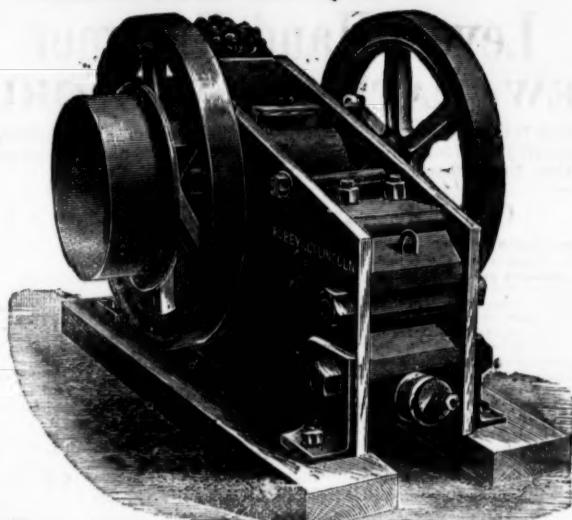
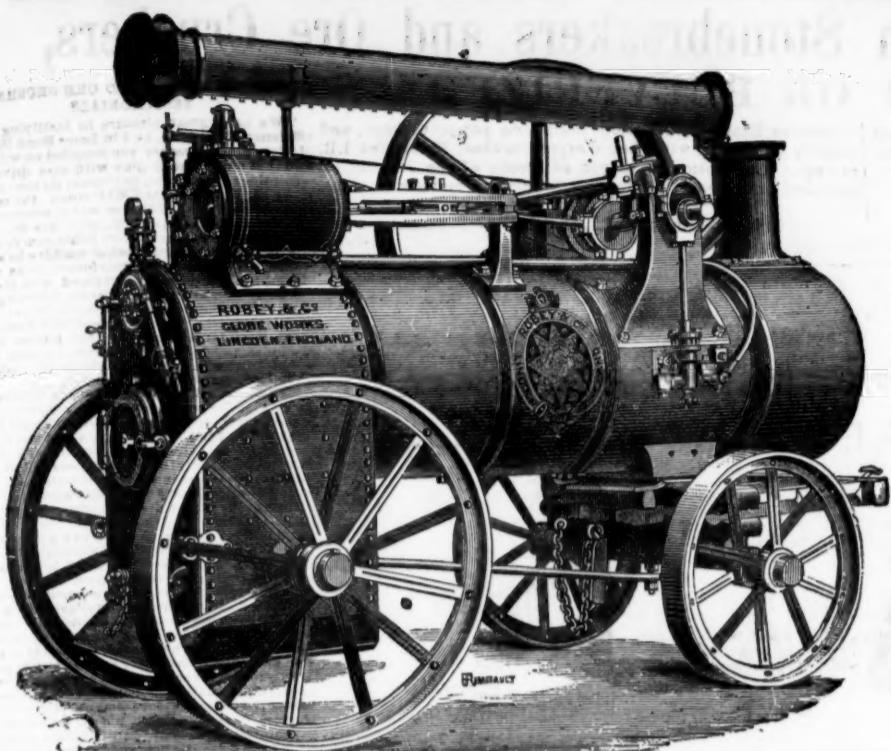
TURBINES, WATER WHEELS, WATER MOTORS, RAMS,

AND OTHER
MINING MACHINERY.

63, Queen Victoria Street,
LONDON, E.C.

Telegraphic Address: "TURNSCREW, LONDON."

ROBEY & Co., LIMITED.



IMPROVED STONE BREAKER AND ORE CRUSHER

For crushing Ores, Quartz, Road Metal, Railway Ballast, Cement, Phosphates, Coke, Coal, &c.

EXPANSION PORTABLE ENGINES

Possess the following advantages:—Great Strength; Extreme Simplicity of Design; First-Class Workmanship; Great Economy in Fuel; Ease of Management; Absolute Safety in Working; Great Power and Durability.

Also manufacturers of Portable Engines, Semi-Portable Engines, Robey Engines and Locomotive Boilers combined (both compound and simple) Vertical Engines High Speed Engines, Horizontal Fixed Engines (simple and compound) Sugar Mills, Locomotive, Cornish and Vertical Boilers, Winding Engines, Head Gears, Mine Pumps, Centrifugal Pumps, Patent Gas and Oil Engines, and every description of Machinery for Builders and Contractors.

GLOBE WORKS, LINCOLN.

SAFETY BLASTING IN COAL AND SHALE, ETC.

SETTLE'S ^{Patent} GELATINE WATER-CARTRIDGE

NOBEL'S EXPLOSIVES COMPANY (Limited), Glasgow, having acquired from Mr. MILES SETTLE the Sole Patent Rights of his Water-Cartridge System of Blasting have now arranged to supply through their local Agents all the Appliances required in connection therewith.

ADVANTAGES OF USING SETTLE'S PATENT GELATINE WATER-CARTRIDGE:

1.—SAFETY IN BLASTING. 2.—NO SMOKE. 3.—NO SPARK OR FLAME. 4.—NO FUMES. 5.—ALL COAL GOTTEN IN LUMPY CONDITION AND WITH A MUCH SMALLER PERCENTAGE OF SLACK THAN IN BLASTING WITH POWDER. 6.—GREAT SAVING OF COST OWING TO MORE EFFICIENT BLASTING, AND TO REDUCTION OF MANUAL LABOUR. 7.—SIMPLICITY OF THIS METHOD OF BLASTING.

Trained Experts will carry out experiments, and instruct Colliery Managers, Miners, &c., FREE OF CHARGE, on application to Nobel's Explosives Company (Limited), Glasgow, or to their Consulting Engineer.

The use of the WATER-CARTRIDGE is recommended by the Royal Commission on Accidents in Mines.

For full information apply to NOBEL'S EXPLOSIVES COMPANY (LIMITED), GLASGOW, or to H. ENFIELD TAYLOR, M.Inst.C.E., the Company's Consulting Engineer, 15, Newgate Street, Chester.

MANUFACTURERS OF GELATINE-DYNAMITE, DYNAMITE, DETONATORS, ETC. ETC.

D. STEWART and CO., Limited,

London Road Iron Works,

AND AT 122, CANNON ST., LONDON, E.C.



**GLASGOW,
ENGINEERS
AND
BOILER MAKERS.**

Telegraphic Address:
"STEWART," GLASGOW.
"OPERA-METER," LONDON.

A.B.C. Code.
Private Code.

Catalogues on Application.

Awarded the ONLY Gold Medal for Stonebreaker at the International Inventions Exhibition, in competition with all other makes.

THE BLAKE-MARSDEN 1884 Patent Lever Hand-Hammer Action Stonebreakers and Ore Crushers, NEW PATENT FINE CRUSHER OR PULVERIZER.

Fitted with Patent Reversible Cubing and Crushing Jaws in Five Sections, and with Surfaced Blocks, requiring no White Metal in fixing. Crucible Cast Steel Levers and Toggle Cushions, Brass or Gun Metal Bearings throughout.

OVER 5000 IN USE.

PULVERIZER TESTIMONIAL
The Fine Crusher we had from you in August last is an excellent pulverizer, and rapidly reduces hard material to fine powder.

"The Pulverizer has been working two months, and answers its purpose most satisfactorily."

"It is with the greatest satisfaction that we write these few lines in order to acquaint you that the 12x3 Pulverizer you provided us with, has quite fully given the results you represented to us, completely reducing our material to an impalpable powder at one operation. Should you refer any one to us we should have much pleasure in recommending the machine."

"I have great pleasure in bearing testimony to the merits and capabilities of your patent combined fine crusher and sieving apparatus. I have tried it on a variety of ores and minerals, and it pulverizes them with equal success. You can put in a small paving stone and bring it out like flour."

"In reply to your favour, I have much pleasure in informing you that the 12x3 Pulverizer we had from you is giving me every satisfaction. The material we are operating on is an exceptionally hard one. I am well satisfied with its working."

"Our experience is that the motion and mechanical arrangements of your machine are the best for pulverizing that we have ever met with."

"The reports from our mines as regards the working of your Fine Crusher (20x5) recently supplied are very favourable, although we cannot quote you exact figures. On being got into position it was tried by hand, with the result that it made short work of the biggest pieces of ore we put into the hopper. You might say how long you would take to deliver another of the same size."

"As I once before stated, your machine is a perfect pulverizer."

I am sure the machine will be a success, and a great one, and there is any amount of demand for such a machine. We can work it with 20 lbs. of steam, and our engine, which is a 12-h.p., plays with the work, in fact we run the Stonebreaker and the Pulverizer both together with 35 lbs."

Positive Draw Back Motion taking no power to work, and entirely dispensing with the old expensive Steel Embedded I.R. Spring. The motion or length of Stroke of the Jaw can be increased or decreased at pleasure, to suit any material.

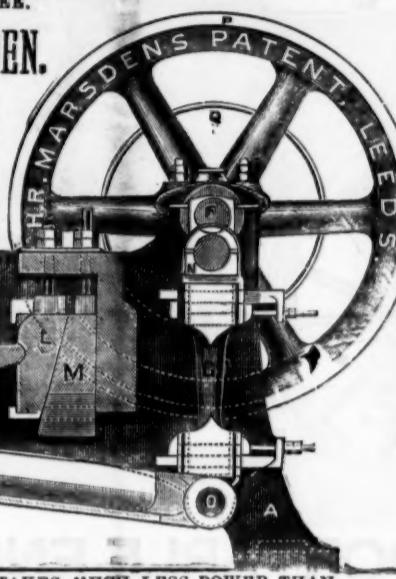
70 First-Class Gold and Silver Medals.

CATALOGUE FREE.

H. R. MARSDEN.

Soho Foundry,

LEEDS.



THIS HAND-HAMMER ACTION STONEBREAKER TAKES MUCH LESS POWER THAN ANY OTHER EXISTANT.

STONEBREAKERS AND ORE CRUSHERS TESTIMONIALS.

"We have great pleasure in testifying to the efficiency of the 15 in. by 8 in Lever Hand Hammer Motion Stone Breaker you supplied us with. We find that our 4 h.p. Engine with ease drives it 100 revolutions per minute, and breaks six ton per hour of the hardest "Diorite" Whinstone. The sample is much before hand broken we have never got done. Our Mr. P. J. GRAHAM, C.E., who was Surveyor of Highways for ten years, before joining our firm, says it is by far the most economical machine he ever had to do with; he had two of your former make, and two of another firm's make; compared with these four machines your new patent gives the following advantages:—The horse-power required to drive is exactly 40 per cent. less. The sample of the broken material is so far superior to that broken by other machines, and even to that broken by hand that we can make no comparison. I am by far the best man we have ever seen."

"I now order three of your Stone Crushers, as 15 by 10, to be of your very best construction, and to include two extra sets of Jaws and Cheeks for each. The last two 20x13 machines you sent me, which are at work in this colony, are doing very well. You will soon find that the railway contractors will adopt your machines in preference to the colonial ones—two of which I have. I know other contractors have had as many as nine of them, which have not given very good satisfaction. Once they know of yours thoroughly, I believe you will do a good trade with the colonies. For reference of the high character of your constructions you can refer to me as having used them with the very best results, both in New Zealand and this colony, and much prefer them to the colonial article, both in point of construction and less liability to go out of order. The material we are crushing is very hard blue stone, for railway ballast purposes. Push on with the order as quickly as possible; I do not think it necessary to have any engineering inspection. I have brought your machines prominently under the notice of all large contractors in the colony, likewise the Government. Many of the contractors have spoken to me in reference to their capabilities, and could only tell them that they are by far and away the best and most economical I ever used. The very fact of me having purchased seven from you at various intervals and various sizes, and two above 12 years ago, and having tried all the other makers is sufficient guarantee of the capabilities and the working of your machines. Yours in every way surpass all others."

CHARLES GRIFFIN AND CO., LTD., PUBLISHERS.

This day. In Two Volumes. Large Svo., Handsome Cloth. Price 45s.

PETROLEUM AND ITS PRODUCTS.

BY

BOVERTON REDWOOD, F.R.S.E., F.I.C., Assoc.Inst.,C.E.

Hon. Corr. Mem. of the Imperial Russian Technical Society; Mem. of the American Chemical Society; Consulting Adviser to the Corporation of London under the Petroleum Acts, &c., &c. Assisted by

GEO. T. HOLLOWAY, F.I.C., A.R.C.Sc., and Numerous Contributors.

WITH TABLES, MAPS, PLATES, AND ILLUSTRATIONS IN THE TEXT.

GENERAL CONTENTS.

Historical Account of the Petroleum Industry.

Geological and Geographical Distribution of Petroleum and Natural Gas.

Chemical and Physical Properties of Petroleum.

Origin of Petroleum and Natural Gas.

Production of Petroleum, Natural Gas, and Ozokerite.

The Refining of Petroleum.

The Shale Oil and Allied Industries.

Transport, Storage, and Distribution of Petroleum.

Testing of Petroleum.

Application and Uses of Petroleum.

Legislation on Petroleum at Home and Abroad.

Statistics of Petroleum Production and the Petroleum Trade, obtained from the most trustworthy and official sources.

* * * The PUBLISHERS beg to call the special attention of all interested in Petroleum to this work, by far THE MOST IMPORTANT and AUTHORITATIVE that has ever appeared upon an Industry which is assuming VAST PROPORTIONS and developing daily in magnitude. Mr. REDWOOD'S WORK gives an account of the UNDEVELOPED SOURCES OF PETROLEUM in various parts of the world, with trustworthy information hitherto unpublished.

London: CHARLES GRIFFIN and COMPANY, Ltd., Exeter Street, Strand.

BREAKFAST-SUPPER.

EPPS'S
GRATEFUL-COMFORTING.
COCOA
BOILING WATER OR MILK.

TELEGRAMS: TUCKS LONDON.

THE STAFFORDSHIRE ADVERTISER.

ESTABLISHED 1795.

The Principal County Paper in the Midlands.

Advertisers will find it the BEST MEDIUM for reaching superior class of readers over large area centred by Staffordshire fifth county in population and sixth in wealth.

Published at Stafford every SATURDAY (Price Twopence), and to be obtained at Euston and Principal Bookstalls between London, Liverpool, and Manchester.

ONLY GOLD MEDAL FOR ALLOYS, INVENTIONS EXHIBITION.

"PHOSPHOR-BRONZE," (Cog Wheel Brand.)

The Best Alloys for all Wearing parts of Machinery, Bearings, &c.

BEWARE OF ALL IMITATIONS, & SPECIFY THE COMPANY'S MAKE.

BULL'S METAL, Ingots, Forgings, Castings, Stampings, Rods and Sheet. Specially adapted for Mining Work.

The Phosphor Bronze Company (LIMITED).
87, SUMNER STREET, SOUTHWARK, LONDON, S.E.

TURBINES. FACTS!

Unlike other Turbines, with from 12 to 24 water inlets to supply it with water, our LITTLE GIANT Wheel has one Vertical Gate only, so that no waste of water, power, and no stoppages takes place owing to small rubbish lodging in the gates as in other types of turbines.

FULL PARTICULARS SENT FREE.
S. HOWES, HYDRAULIC ENGINEER,
64, MARK LANE, LONDON E.C.

GENUINE PACKING

IS ONLY MANUFACTURED BY

TUCK AND CO., LIMITED.

116, CANNON STREET, LONDON;

And at LIVERPOOL, CARDIFF, NEWPORT, BARRY,
SOUTHAMPTON, DUBLIN & MELBOURNE.

INDIARUBBER, LEATHER, AND ASBESTOS GOODS.

WRITE FOR SAMPLES &
PRICES.